DUN'S REVIEW and Modern Industry

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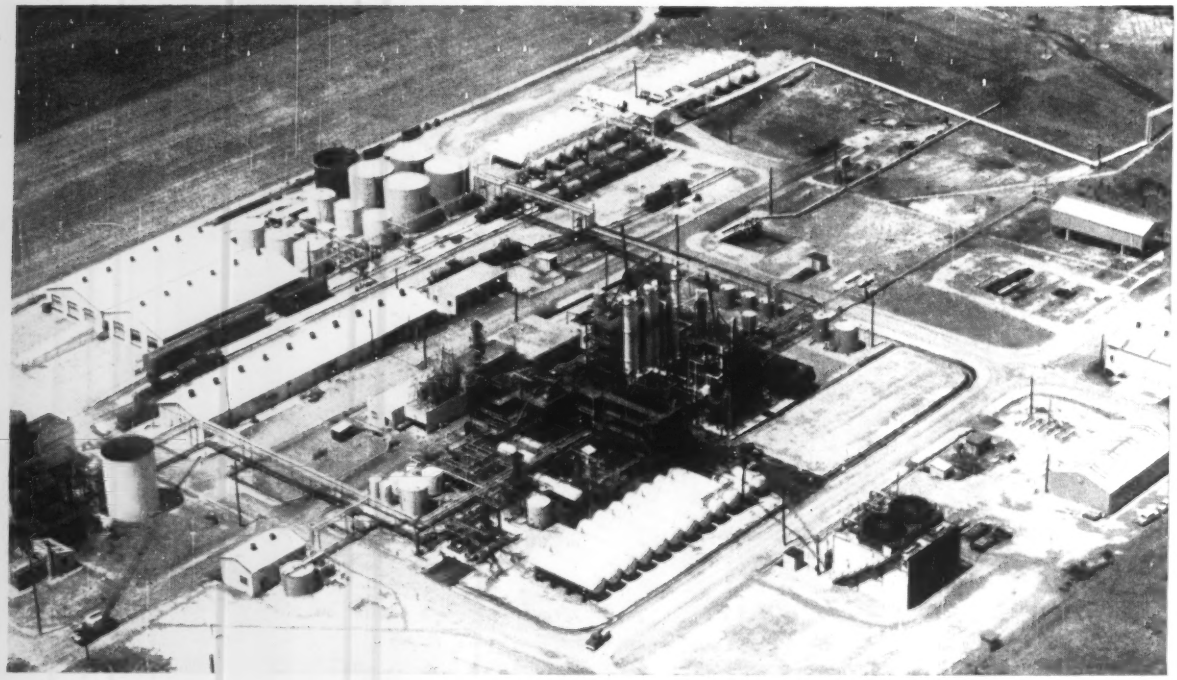
COMPASS POINTS OF BUSINESS



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DUN'S REVIEW and Modern Industry

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THE COVER

Fair trade is still putting up a plucky fight, and it's not yet down for the count. Still, the opposition has been landing some damaging body punches in the last couple of rounds. Artist: James Flora.

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the REVIEWING STAND

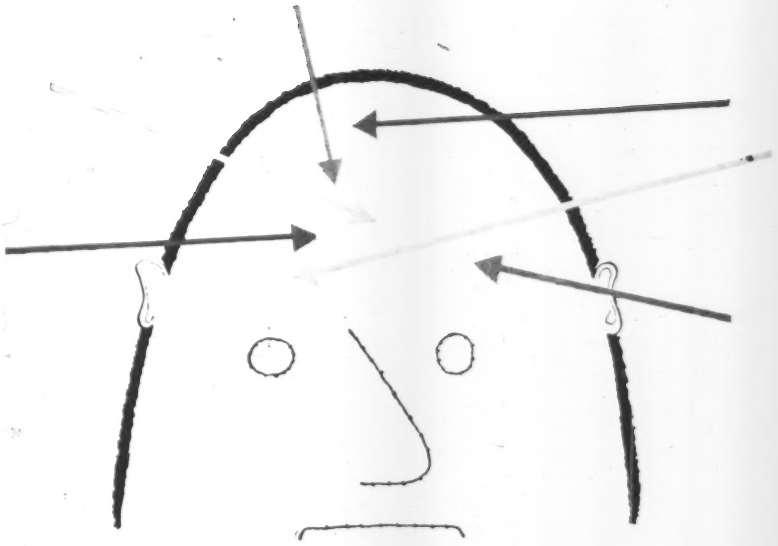
• Progress for the rest of 1958 will be measured by sales ingenuity. Whether we use the high-pressure psychological approach or the low-pressure rational approach, there is no place for the lukewarm social approach that begins with the glad hand and ends with the brush-off. During the months ahead we will have to give consistent attention to the point of sale and every significant factor leading up to it. In the lush days of the seller's market, salesmen dwindled in number and in some areas dimmed in importance. We are still short of good salesmen who know their products and the needs of their customers.

The best catalog in the world can't take the place of the salesman who knows where to go, whom to see, and how big an order to ask for. The word of the good salesman is a catalyst—it sparks action and decision. It has value, even when the answer is "no" or "maybe."

This is a good time to cultivate the marginal account on a selective basis. Every good or premium account was once small and occasionally "slow pay" in meeting terms of sale. A well-informed salesman who knows the trend can pick the marginal accounts with a high potential for the future. But he has to have the facts.

The sale well begun is half won, and this requires adequate planning for interviews. Estimates of the daily average of time spent at a customer's desk in the actual sales pitch vary from 30 to 90 minutes. These are the fighting minutes which mean profit or loss to the salesman and his company. In an early issue, Tom Kenny will come up with an answer to "how many sales calls make a sale," based on direct reports from leading sales organizations.

• Rarity and beauty go together in jewels and precious metals. With the rare earths, discussed in this issue by Mel Mandell, it's a different story. As a group, they are neither beautiful nor scarce; but individually they



one headache you don't need!

(fringe benefits for your guard force)

Steadily increasing fringe benefits are pre-eminent among the cost factors in the profit squeeze all management is facing.

The national average is more than 20% of total payroll costs . . . with some concerns paying 50%! And fringe benefits are going to increase.

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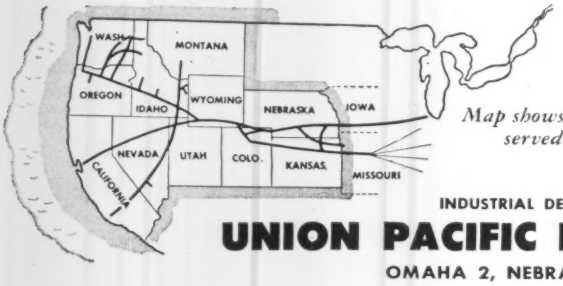

Map shows the vast western area served by Union Pacific.

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INDUSTRIAL DEVELOPMENT DEPARTMENT

UNION PACIFIC RAILROAD

OMAHA 2, NEBRASKA

are rare and relatively costly, because their family ties are strong and they stubbornly resist all but the most determined efforts to get them apart. There's a strong family resemblance (and Latin flavor) in their names, too. Listen to this hypnotic chant: lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, dysprosium, thulium, lutetium. Incidentally, three of the clan—ytterbium, erbium, and terbium—are named for the Swedish town of Ytterby, the home of one of the discoverers. Quite a sample of scientific smorgasbord for the crossword puzzlers!

• For many years our best-advertised products abroad were cowboys, Indians, gangsters, and swimming pools, which reflected the earlier influence of Hollywood and the export of American films. Now we are importing foreign films, and Hollywood is living on a television diet of 1940 canned goods. In the meantime, we have had an opportunity to assess our past sales effort in markets overseas and measure its worth. But what of our current performance? In this issue, Alex Stanley examines the overseas trade fairs and comes up with a favorable report. There are, however, still many U.S. concerns that are allergic to foreign orders, visualizing customs difficulties, currency headaches, and credit problems. Yet when the seller goes overseas and understands the people with whom he'd like to trade, there is a profitable market for American merchandise. Our exports represented almost a $20 billion market last year.

• When a company "goes public," it pulls up the shades on management and invites scrutiny, not only from the professional "peeping Toms" of the brokerage offices, but from the public in general. And the shades must be up on all windows if management is eager to show that its house is in good order. At times, the management of a company with closely held stock finds it difficult to shift its attitude and resents the eager-beaver intrusion of the common stock investor into company facilities and management. In a coming issue, an experienced observer will describe the problems of the transition period and suggest how new proprietors, whether their share is large or small, should be received.

—A.M.S.

Short cuts with Recordak Microfilming

Latest reports on how this low-cost photographic process is simplifying routines for more than 100 different types of business . . . thousands of concerns

TAKES CHRISTMAS RUSH IN STRIDE

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You would expect the Billing Department at Wallace's to still reflect the frenzy of the Christmas rush. But with Recordak Microfilming they got the bills out on schedule same as every month—without extra help or overtime.

Photographing the customer's sales checks, and sending them out with the bill, ends need to list and describe each purchase. Only the sales check totals and credits are posted on bill. As a result, each billing clerk can handle 4 times as many accounts. Other advantages: Customer questions are answered in advance by sending original sales checks out with bill. And fire insurance rates on accounts receivable insurance are reduced by vault-storing Recordak Microfilms.

SPEEDS THEIR SNAPSHOTS BACK

OMAHA, NEB.

Snapping pictures of "snapshot envelopes" with a Recordak Junior Microfilmer lets Bri-Tone Division of Calandra Camera Company speed deliveries to some 2,000 "pickup" stations. And it cuts costs drastically—four times as many billing clerks would be needed if the data on envelopes were transcribed manually for office record.

Completely accurate film records—which can be reviewed immediately in a Recordak Film Reader—also make it easier for Bri-Tone to answer questions about any shipment or to trace the occasional misdirected envelope of snapshots.

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In booming Los Angeles more than 4,500 multi-page documents are recorded daily in the County Recorder's Office—the busiest such office in the world.

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Chances are Recordak Microfilming is now simplifying routines just like yours. Write today for free booklet giving over-all picture and details on Recordak Microfilmers, priced as low as $550. No obligation whatsoever!

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WASHINGTON, D.C. — From the flood of bills that have gone into the hopper since Congress met, plus the legislation partially dealt with at the first session of the 85th Congress, it is apparent that the lawmakers will not have to look for work. Perplexing problems, both domestic and international, have bobbed up and are clamoring for attention. Congress is particularly anxious to do something in situations that make for unemployment. Scores of proposals await committee consideration. Local area assistance, which made some progress at the last session, has taken on new life. Republicans and Democrats differ, however, as to methods, scale of relief, and the amount to be appropriated.

In 1930, anti-recession measures were too little and too late. In view of that experience, much is being heard in Congress about the advisability of early and adequate pump priming. It will be easier now to bolster the economy with appropriations for the military and for scientific education and research. But agriculture may get a real wallop. The political influence of consumers of food has increased; that of the farmer has declined. Contract awards for road work have been gradually increasing, and the total will shoot up during the last half of the year. The highway program is a more important economic pump-primer than is generally realized.

The seniority rule has given the House Ways and Means Committee an outstanding chairman in the person of Wilbur D. Mills (D., Ark.), who would undoubtedly be elected Speaker of the House were Sam Rayburn (D., Texas) to retire. He is regarded as one of the most knowledgeable men in Congress on tax matters. Determined to add materially to receipts by closing loopholes, Mills will push a thorough going-over for tax exemptions. He is opposed to tax reduction and to preferential tax treatment for small business under present conditions. He avers that "the amount of tax the individual pays should not depend on the *source* of his income, but only on the *amount* of his income." That is interpreted to mean that he also opposes tax-free securities. He wants to see reductions in both maximum and minimum income tax rates. Any liberalizing of social security payments, he believes, should also provide ways to pay for the benefits.

A harried Ways and Means Commitee also expects to find time to consider proposals in the field of Federal-state fiscal relations. State and local governments are now spending more than one-third of total government outlays. In fact, the states are, at present, spending twice as much as in 1946. Population increase and population movement are adding steadily to costs. Mechanization of agriculture has released large numbers of unskilled or semiskilled workers, who gravitate to the cities. They contribute little to the receipts of local government. The larger taxpayers are moving to the suburbs, where their need for schools, water, sewers, paved streets, and police and fire protection adds to the demand for public funds. In the United States as a whole, local taxes now take ten cents out of every dollar of per capita income. Competent observers say the pressure on state and local spending will intensify in the years ahead, bringing in its wake the possibility of Federal aid, with its inevitable strings.

A strong disposition to do something about improper practices of labor unions is evident in Congress. At this session, chances favor legislation for safeguarding pension and welfare funds. Congress may even provide that union financial statements shall be audited and that the Internal Revenue Service shall be given the power to examine the books and records of labor unions and other tax-exempt organizations.

Under present law neither Federal nor local officials can take action when union funds are misappropriated or misused. Individual union members have no control over welfare funds administered by a trusteeship. Congress will probably take action to prevent abuse of these trusteeships. Ways to insure more democratic control of unions will also receive attention.

While threats, bullying tactics, and misuse of picketing are matters for local police control, Congress believes it can help by publicizing the lack of control by the rank and file.

Legislation for which labor is working hard includes: income tax reductions in the low brackets, emergency aid to states for school construction, an increase of 10 per cent in Social Security benefits, added health benefits, extension of the minimum wage, encouragement of housing construction (goal: 2 million

Says Ralph F. Lafferty, Executive Vice President of ZEBCO Co., Tulsa, Okla.

"Music by *Muzak* Has Increased Our Production 10 to 13%..."

One of the assembly areas in the ZEBCO plant, where "music by MUZAK" helps relieve tension and fatigue.

WHAT can management do when Worker Tension begins to slow down production? Is there any way to combat the fatigue and boredom caused by monotonous manual or clerical chores?

ZEBCO, the world's largest manufacturer of enclosed type, spin-cast fishing reels, *found the answer in* MUZAK. Ralph F. Lafferty, Executive Vice President of ZEBCO, reports:

"Music by MUZAK increased our production 10 to 13%. From the very first day MUZAK was installed, one could begin to see the increase in production. Employees are more relaxed and cheerful. This is reflected in general high plant morale, as well as in the excellent production reports." (On this page you will see actual ZEBCO Company work tickets, which show the increases in unit production figures effected by MUZAK.)

An Indispensable Tool of Modern Management

Like air conditioning, sound-proofing, fluorescent lighting, "music by MUZAK" has won a permanent place as a tool of modern management. It pays its way many times over in increased efficiency and productivity. Typical of many such results, it has . . .

- Increased production 20% in the drafting department of the Fischer Lime and Cement Company of Memphis, resulting in savings of $300 to $400 a month in one department alone.
- Increased production 9% and decreased absenteeism 7% for the Loft Candy Company of Long Island City.
- Reduced clerical errors in the auditing department of the City National Bank & Trust Company of Kansas City, by 11%.
- Increased production 5% and decreased absenteeism 5% for the National Gypsum Company of Buffalo.
- Increased output per operator in the work clothes plant of Bayly Manufacturing Company, of Denver, by 10%.
- Increased key punch production of the Mississippi Power & Light Company's IBM operators to an 11-year high — two months after it was installed.

Why MUZAK is So Different From ORDINARY "WORK MUSIC"

How can "just music" accomplish results like these? The answer is simple. It can't! For MUZAK is not "just music." MUZAK has spent 20 years perfecting a *scientific* way to meet the minimum requirements for a successful work-music program.

YOU NEED A SPECIAL KIND OF MUSIC which is "heard but not listened to" — which stimulates people without distracting them. MUZAK has its own $10,000,000 treasury of custom created *non-distracting* background music.

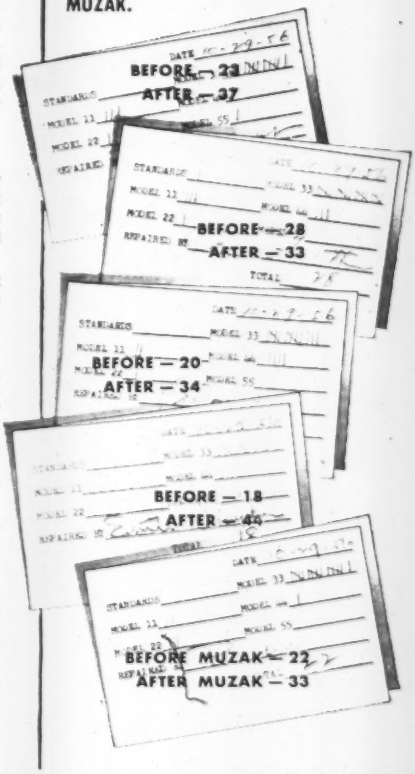
YOU NEED SCIENTIFIC PROGRAMMING to suit the time of day, place and type of work activity. Each MUZAK program is based on 20 years' study of the effects of music on people.

YOU NEED "CONTROLLED DYNAMICS" to penetrate noise barriers, mask out unwanted noise, without becoming distractingly loud — a technique which MUZAK has pioneered.

YOU NEED A COMPLETELY AUTOMATIC SYSTEM which avoids the cost of assigning personnel to purchase and store records or tapes, determine schedules, operate and maintain equipment. A flick of the switch starts MUZAK.

These are some of the reasons why upwards of 20,000 progressively managed companies are serviced by MUZAK, including 15 of the 17 top companies certified as "Best Managed" by the American Institute of Management . . . 11 of the 12 "Best Known Companies" . . . 40 of the 70 largest insurance companies. Why not find out what MUZAK can do for your company? Send for the free booklet described below.

. . . and here are actual ZEBCO Company work tickets, showing unit production figures before and after MUZAK.



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This interesting booklet explains how MUZAK lessens fatigue, reduces mistakes, cuts down idle talk, eases friction, and quickly repays more than its cost.

It shows the basic difference between MUZAK and other kinds of work-music. It charts, for instance, the effects of MUZAK upon the key-punch operators and verifier operators of one of the world's largest insurance companies.

It takes you inside the MUZAK system, shows how MUZAK creates, transmits and protects its $10,000,000 treasury of especially programmed work-music. This booklet is yours for the asking. Simply mail the coupon and you will receive a copy without cost or obligation of any kind. MUZAK *Corporation, Dept. 52, 229 Fourth Ave., New York 3, N. Y.*

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Please send me, without obligation, a free copy of *"An Answer to Worker Tension."*

Name ..... Position .....

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"Our IBM 705 was paying for itself in a few weeks—and we had just scratched the surface..."

—John S. Woodbridge, Comptroller, Pan American World Airways, Inc., in an exclusive interview

ACCOUNTING ENTERS THE JET AGE:

How can you find the best way of bringing the benefits of electronic data processing to your company? What does "electronics" require in the way of planning and personnel? What can a company expect in actual savings and benefits? You'll find the answers in the remarkable achievement of Pan American World Airways, the transportation industry's pioneer in electronic data processing. In this recorded discussion, John S. Woodbridge, Comptroller, and James McGuire, Assistant Comptroller—the men who spearheaded Pan Am's project—reveal the problems and practical solutions to a successful data processing program.

Q. Let's start at the beginning. Why did you turn to high-speed electronics?

A. Frankly, with our explosive increase in business, we had come so far and grown so fast that the saturation point for our existing accounting and record-keeping systems had been reached. At that point—it was early in 1954—we began exploring electronics seriously.

Q. Were there many problems at that stage?

A. Some, but we did know pretty well where we wanted to use electronics. And we actually had a good part of the analysis done before we started. We've had continuing cyclical reviews of our methods for many years now. When you've got those studies behind you, half your evaluation work for electronics is done.

Q. How did you go about finding a system best suited to your requirements?

A. We compared five different systems. *Expandability* was typical of the features we looked for. We felt the system we chose should be able to encompass further company growth with the simple addition of extra units. The IBM 705 was just such a system.

Q. Were there other factors—beyond features of the system itself—that affected your choice?

A. Yes, of course. Aside from satisfying ourselves that the equipment would meet our needs, we looked into such things as the educational and service programs of the manufacturer. How well could he train our people? How well-trained were his own people? We looked into the extent and nature of his systems experience and know-how. IBM scored highly in all these areas.

Q. After you chose the IBM 705, what was the next step?

A. Programming. You may be surprised to learn we did this job ourselves—with IBM's help, of course. We felt on safer ground training some of our own people than in hiring outside programmers who would first have to be taught our business. Experience has borne out the wisdom of this approach. But here's a key point: we took only our top people—our department heads—for the job. There were

McGuire: *"When you're comparing electronic systems, you've got to look at the manufacturer's know-how and service facilities, too."*

THE PAN AM STORY

about ten altogether. They went to IBM program school for four weeks, and then went to work. In effect, we locked them up and said, "Don't come out until the job is done."

Q. How did they work out?

A. Very well. Our programs—in fact the entire operation—went off without any major hitches. That was in May, 1956. Since then, there has been continued growth in the company and in accounting volume, yet we haven't had to enlarge the department.

Q. Are there further savings and benefits you can point to?

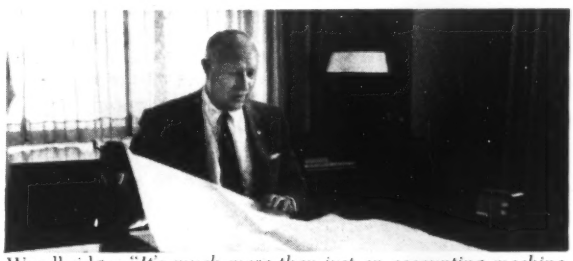
A. Plenty. We're now handling—on just one-and-a-half shifts—a number of major applications, ranging from payroll through inventory analysis to "paper jet flying." In a typical area—monthly passenger accounting and control—we cut a 4,000-hour job down to 140 hours. And right off the bat, we picked up $350,000 a year in interest by our ability to process bills for the airline clearing houses in two days instead of in two weeks.

Q. You mentioned applications other than accounting. What about these?

A. They're interesting by-products of our electronic accounting equipment, and they don't take up much machine time . . . yet they have tremendous potential for us. Take this "paper jet" application we spoke of. Our engineers feed into the 705 such data as distances between cities, runway lengths, and weather factors. Against this we project the characteristics of new jet aircraft, and the 705 produces—among other vital data—the cost per ton-mile for each type of plane under different cruising conditions. We can know in advance which of these aircraft will pay off best for us. The 705 does in one-half hour what would have taken months and months of manual calculation.

Q. You installed this IBM 705 for accounting. How did you get into these other areas?

A. That's just the point. This 705 is much more than an accounting machine. It's a management machine. All you have to do is expose your people to the potential of electronic data processing—and before you know it, you have more good ideas for using it to improve internal operations than you ever thought possible.



Woodbridge: *"It's much more than just an accounting machine. It's a management machine."*

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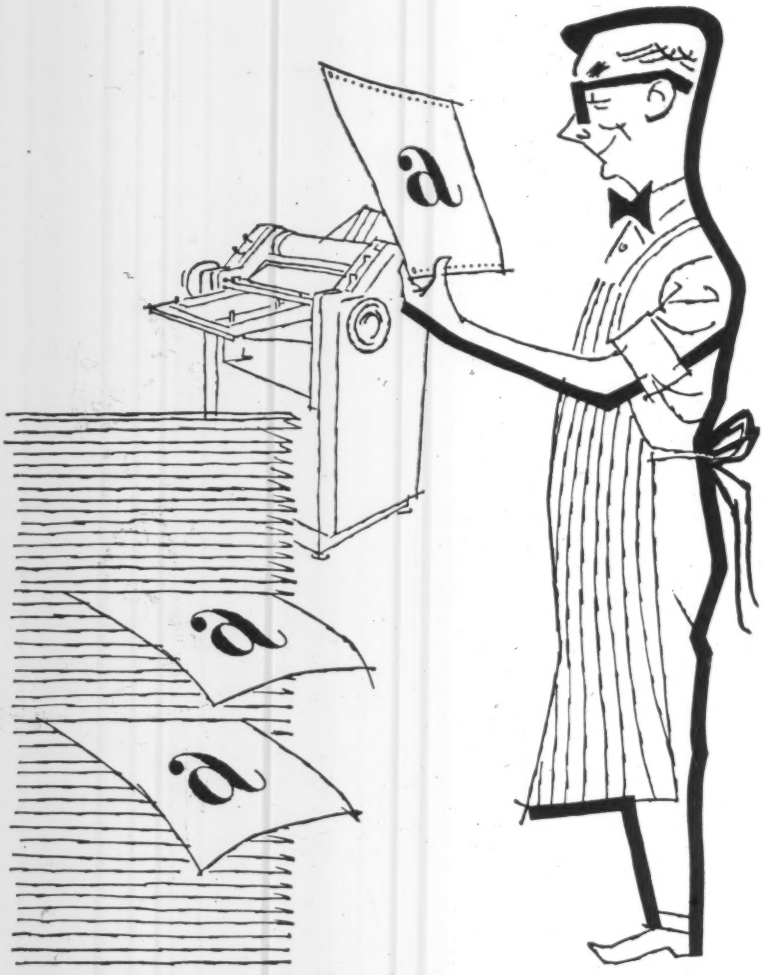

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For the fastest, most uniform copies ever!

You've got to see it to believe it—the speed and quality Colitho sensitized acetate plates bring to straight run duplicating! Quick inking, dimensionally stable, Colitho plates are the easiest of all to handle—from preparation to duplication. Result? The cleanest, most uniform copies possible, from first copy to last, box after box. And production time is cut way down, too.

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homes a year), and Federal assistance to industry in areas with chronic unemployment. Efforts to repeal the Taft-Hartley Act have been dropped, but its overhaul is advocated. Labor is also giving full support to measures for safeguarding welfare and pension funds.

Views of Government officials on economic prospects are usually at variance with those of outside economists. Appointive officials are expected to emphasize favorable factors, and their views are discounted. There is more faith in the opinion of career officials, who handle the great body of statistical data gathered by the Government. But few career officials are willing to accept the more pessimistic forecasts that are coming from various sources outside the Government.

Commerce Secretary Sinclair Weeks emphasizes that the over-all economy in early 1958 is at a higher level than the comparable period of any previous year. He refers to the recession as a "mild dip" or a "sag" in the economy and reminds the public that greatest gains follow a decline.

The professional analysts think that business is going to have some rough going and that government spending cannot be stepped up rapidly enough to turn the tide alone. They look with some apprehension on the growth of protectionist sentiment, which they believe results from the profit squeeze. The complacency of the period when it was a problem to keep the domestic market supplied is gone. They fear that pessimistic comment will impair the confidence of Europeans and cause a decline there that could make recovery here more difficult.

Observers are also disturbed by the stubborn stand of labor leaders who are ignoring the drop in the industrial index and other signs of a downturn and are continuing to talk about more pay and a four-day week. Stability could be achieved quickly if we were to work as hard as the West Germans, they say.

Paul Wooton

Never before has Chevy been so right for manufacturers!

Here's a truck specially designed to take to your kind of work like a duck takes to water! It's Chevrolet for '58 with new hustle, muscle and style that mean money in your pocket!

As you can see, Chevy's a honey of a truck this year, and that handsome, broad-shouldered '58 appearance only hints at the host of new and improved features that are ready to put you dollars ahead in the years to come. *Here's a truck ideally suited for your line of work.* In styling, for instance, Chevrolet for '58 has what it takes to build your business prestige every day in the week: new dual headlamps, new massive grille, newly contoured hood and fenders, new cab beauty, to mention just a few innovations.

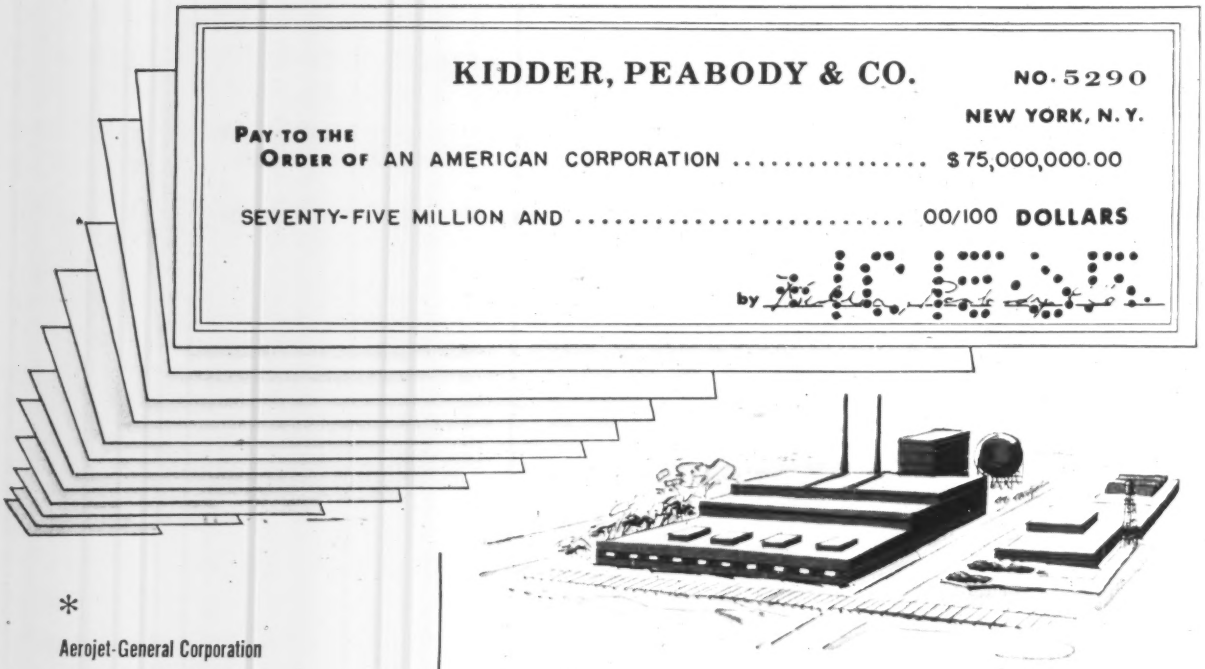
And what workers these new Chevrolet middleweights are! There's extra power to do more work faster from new, more durable Taskmaster V8's . . . or from a new version of the famed Jobmaster 6, standard in Series 60. *High* G.V.W.'s—up to 14,000 lbs. in Series 40, and up to 21,000 lbs. in Series 50 and 60 models when equipped with heavy-duty options—assure big, profitable payloads. And you'll have the right chassis components for your job: husky parallel-design frame, hefty rear axle and the proper springs and transmissions to meet your needs precisely.

There are many such reasons why Chevy's never been *so right* for your work—many more reasons why you'll want to see your Chevrolet dealer soon! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET

NEW CHEVROLET TASK·FORCE 58 TRUCKS

How did these COMPANIES* raise $622,226,000 of new capital?


KIDDER, PEABODY & CO.
NO. 5290
NEW YORK, N. Y.
PAY TO THE ORDER OF AN AMERICAN CORPORATION $75,000,000.00
SEVENTY-FIVE MILLION AND ..... 00/100 DOLLARS
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Aerojet-General Corporation
Beatrice Foods Company
Carolina Telephone and Telegraph Company
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Florida Power Corporation
Florida Power & Light Company
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Idaho Power Company
International Milling Company
Interstate Power Company
Missouri Public Service Company
Public Service Company of New Hampshire
Rath Packing Company
South Carolina Electric & Gas Company
Standard Packaging Corporation
Standard Pressed Steel Co.
United Utilities, Incorporated
The Washington Water Power Company

42 additional Corporations—not listed.

Some of this $622,226,000 was raised by public offerings of securities, some through private placements—some of the securities were common stocks, some were preferreds, some were bonds. All of it was raised during 1957 by Kidder, Peabody & Co.†, acting as manager or co-manager of nationwide underwriting groups or as agent.

You are invited to call on us when your corporation needs additional capital.

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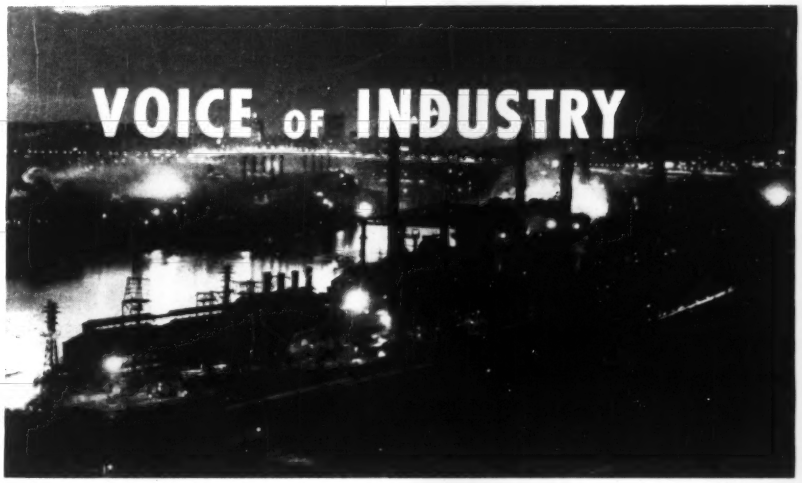
VOICE OF INDUSTRY



Devaney Photograph

Beyond the current business dip, what are the growth prospects for our basic industries? Is management conformity sapping competitive vigor? Will advancing technology swamp the smaller business? Here are some specific top-management views and predictions.

SOURCES OF TOMORROW'S GROWTH

HOBART C. RAMSEY, *chairman of the board, Worthington Corporation, before the Newark (N.J.) Rotary Club*

We are told by leading economists that the postwar industrial boom is finally coming to an end after twelve years, and that we are entering on a period of transition.

If we look for the stimulus that will bring us out of this transition into a renewed period of growth, we can find it in the needs of the consumer.

We know that the American consumer has money in his pockets—more than he ever had before. His credit is also good. He has used a lot of it, but he has by no means exhausted his borrowing power. He has grown accustomed to a steadily rising standard of living and he wants it to keep on that way.

Our market research department has been closely studying the trends in consumer spending as compared with new orders for capital equipment over the past ten years. Since the Korean War, when there was a substantial bulge in orders for capital equipment, the two curves have been closely parallel, with the rate of equipment orders always a little higher than the rate of consumer spending. But the two lines have now crossed—the rate of consumer spending is above that of capital equipment orders. We think that is a good sign for the capital goods industry. It means that we shall soon have to start catching up.

KEEPING UP WITH THE CUSTOMER

PAUL S. WILLIS, *president, Grocery Manufacturers of America, Inc., at the Fourth Annual New Product Seminar*

Change means opportunity for business. Yet often a company finds it extremely difficult to change its way of doing things. This is particularly true because of the disturbing trend toward conformity

OUTPERFORMS and Out Values all lift trucks in its class

Regardless of Price!

PRICE $3975.00 "WE INVITE COMPARISON"

1500 lbs LOAD CAPACITY

ENGINEERED YEARS AHEAD

- Complete bearing control throughout
- Synchronized 12-volt heavy duty system
- Feather-controlled stops
- Equipped with automatic charger and heavy duty industrial battery
- Self-aligning dual floor brakes

OPERATES IN 28" AISLES

APPLICATIONS

- Hydraulic loading, unloading, stacking, moving, any type of material...in large or small plants.

MORE THAN 40 BIG JOE MODELS

- Range up to 2000 lbs. capacity
- Lifting heights to 130"

NEW 24-PAGE CATALOG

In-Between Handling is our business! Write for our new 24-page catalog.

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Export Division: 400 West Madison St., Chicago

BIG JOE Hydraulic Lift TRUCKS

BIG JOE

MANUFACTURING CO.
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Don't walk···talk!

New Executone intercom saves steps, increases output, cuts costs!

Executone Intercom changes *walking* time to *working* time—gives you more working minutes per hour. Result? More work can be handled faster, more efficiently, by the same employees!

Snarled, overloaded switchboards are relieved; hard-to-locate employees are quickly found; instant, crystal-clear, voice-to-voice contact between departments ends wasteful walking. You get more work done faster—at lower cost!

And because the new Executone has "built-in-courtesy," each call is announced by a soft chime and signal light. It never interrupts, can't eavesdrop. Handset feature available for confidential use.

Thousands of firms, large and small, found Executone works business miracles... quickly pays for itself many times over. Learn how Executone can save money and time for you. Mail the coupon now. There's no obligation.

NEW Executone INTERCOM AND SOUND SYSTEMS

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Information on:
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on the part of middle management.

A lot of people are becoming reluctant to stand out from the mob. Apparently they feel that it is "safer" to escape notice, and they want above all to be safe. They long for security, and they seem to believe that the surest path to security is to "conform" as much as possible to the habits of their friends and associates. The growing business practice of group decisions and committee meetings reflects the thought that there is safety in numbers.

Conformity is not much different from timidity. And when a company is staffed with conformists it is heading for trouble. When a committee of conformists sits down to consider a new idea, they are usually most concerned with asking: "What *harm* can this do?" This question reflects their own fears. Their proper consideration should be: "What are the advantages of this idea, and how can we benefit from it?"

Under today's fiercely competitive conditions, the passive course which conformists consider "safe" is really the most unsafe thing in the world for their companies. Paradoxically, it may turn out to be unsafe for the men themselves—because management can't afford to be saddled with them. George Coppers, president of National Biscuit Company, recently said, "Any time I have two men who think alike, I can do without one of them."

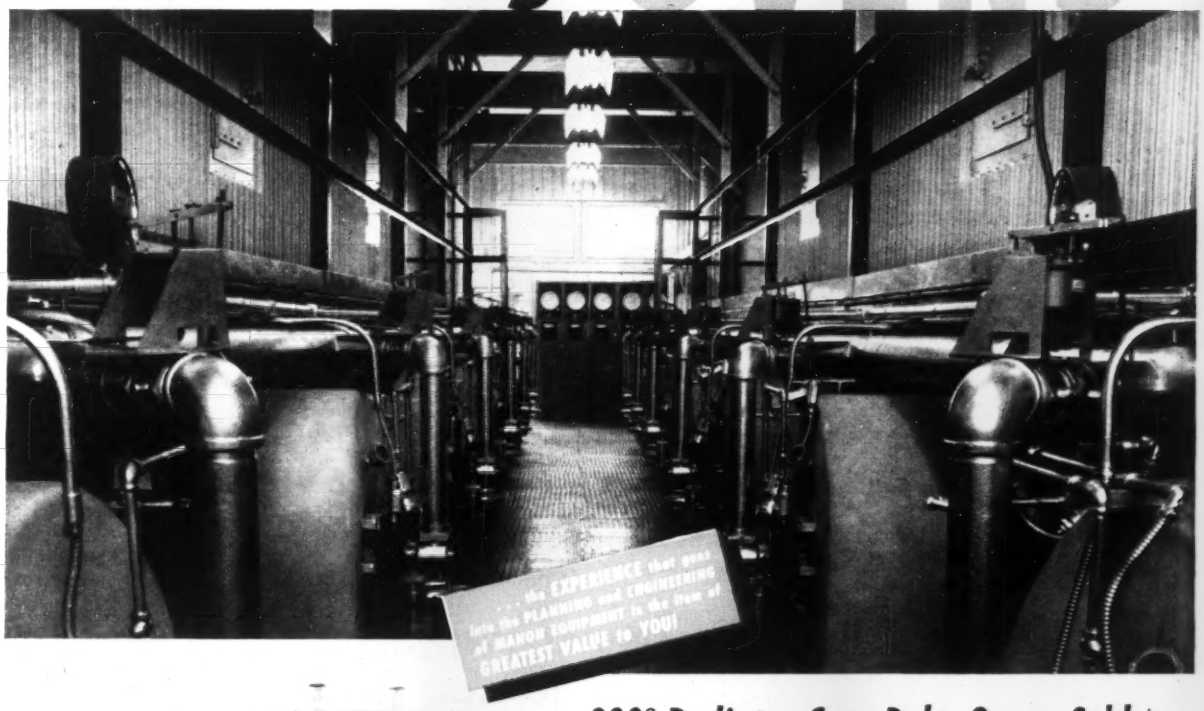
SMALL BUSINESS SHARES REWARDS OF RESEARCH

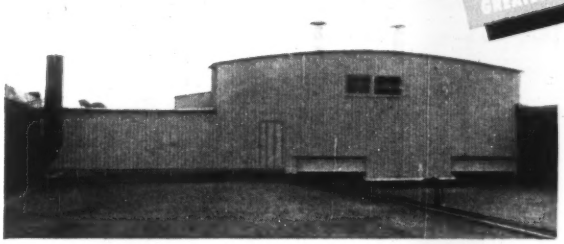
DR. GUY SUITS, *vice president and director of research, General Electric Co., at the President's Conference on Technical and Distribution Research for the Benefit of Small Business*

Industrial scientific research is a primary source of growth and profitability in modern industry, and it is rapidly assuming its appropriate functional role along with the older industrial functions.

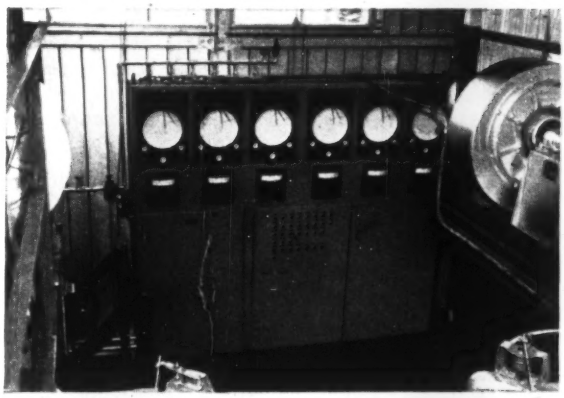
Of course, the primary benefits from an industrial research program go to the company's customers in the form of new and improved products

Processing OVENS





Exterior View of Oven Housing on Roof of Plant. Walls and Roof are Incombustible, Double Rib, Interlocking Rolled Steel Plates.



Control Panel which Contains Starters, Temperature Indicators, Temperature Recorders, Safety Devices and Emergency Cut-Offs.

800° Radiator Core Bake Ovens Solder Radiator Tubes and Center Cores!

The Core Bake Ovens, illustrated here, were recently installed and housed by Mahon on the roof of an automobile radiator manufacturer's plant. The two parallel ovens, which normally operate at 800°, were designed for emergency temperatures up to 1000°. Each oven has six heating zones . . . controls, temperature recorders, safety devices and automatic emergency cut-offs are contained in one compact control panel. The exterior housing which encloses the two ovens, and conveyor lines to and from the ovens, is an integral part of the oven construction on two sides. This installation is typical of thousands of Mahon solutions of production problems demanding specially engineered processing equipment. When you are in need of a special processing oven, or special production equipment of any kind, you will want to discuss your requirements with Mahon engineers . . . you'll find them better qualified to advise you on both methods and equipment requirements. And, because Mahon can point to over thirty-five years of successful operation in this highly specialized field, and has the ability and facilities to handle any type of project large or small, you can be assured that their advise and recommendations will be sound and unbiased. See Sweet's Plant Engineering File for information, or write for Catalogue A-658.

THE R. C. MAHON COMPANY • Detroit 34, Michigan

SALES-ENGINEERING OFFICES in DETROIT, NEW YORK and CHICAGO

Engineers, Fabricators and Erectors of Special Processing Ovens of All Types; Metal Cleaning and Rust Proofing Machines; Conveyorized Cleaning and Pickling Machines; Dry-Off Ovens, Cooling Tunnels, Spray Booths, Flow Coaters, Dip Coaters, Finish Baking Ovens, and Complete Comveyorized Finishing Systems; Core Ovens, Heat Treating and Quenching Equipment for Aluminum and Magnesium, and Many Other Units of Special Plant and Production Equipment.

MAHON

MANAGEMENT'S JOB IS TO MAKE A PROFIT!

Why burden yourself and your executives with the countless details of an *unproductive* department—the purchase and care of your trucks?

Leasing your trucks the "NATIONAL" way doesn't cost, it *pays*. That's because you immediately have top executive time available for the profit-making departments of your firm.

You add truck experts to your staff, *but not to your payroll*. You gain both executive time and *capital*.

Plan now to lease a CHEVROLET or other fine truck from the NATIONAL firm in your area. For the name and *facts* about truckleasing write:

National® **TRUCK LEASING SYSTEM**
Members in principal cities in the United States and Canada
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Would you like to have your fleet supervisor ride on every trip of each truck . . . *without leaving his desk?*

WAGNER-SANGAMO *TACHOGRAPH* "supervises"
every movement of truck from start to return

When you equip your trucks with TACHOGRAPHS it's like having your fleet supervisor ride on every trip . . . without leaving his desk.

Tachograph is mounted on dashboard. Chart, placed inside the instrument before each run, makes a graphic record of time of operation, duration of stops, speeds and distances traveled.

These graphic reports of every run . . . help cut unscheduled stops, help you plan better routing, control vehicle speed, and lower operating costs by encouraging savings in time, gas, oil and tires.

Get details. Mail coupon for Bulletin SU-3.

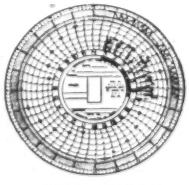
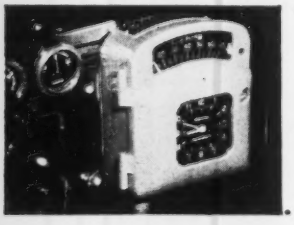


CHART TELLS ALL



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We operate_____ Vehicles W558-7

and services, and to other direct participants in the enterprise. But the same research and development effort also benefits other businesses, particularly small business. New products created by large-scale industrial research almost invariably create new markets, not only for the company that supported the research, but for many other companies as well.

Of all the ways in which large-scale research benefits small business, perhaps the most important is through the creation and diffusion of scientific knowledge. Large companies, although they account for only 40 per cent of manufacturing employment, do 72 per cent of the industrial research and development.

OLD BUT USABLE INVENTIONS AVAILABLE

C. W. OOMS, *patent counsel, LaSalle Steel Company, at a dinner following the opening of the Department of Commerce Patent Exhibit*

Sometimes an inventor is ahead of his time and his patent expires before there is public demand for his invention. An old patent lawyer I know made two inventions in the 1890's that suffered from technological premature birth. One was a method for making printing plates on celluloid sheets directly from photographs; the other, a means of transmitting photographs electrically. Both, in refined form, are now in use, 30 years after his patents expired. The magnetic wire recorder had the same fate.

While the invention may be prematurely born, it may also be overtaken by other improvements, and we have all seen examples of that.

The expiring patents, of which there are as of today 2,810,127, are the greatest library of practical applications of invention known to man. Not only can the teachings of each of those patents be copied and used just as described, but the teachings can be used in any improved form that may occur to the skilled mechanic. That repository of technical teaching is a vast resource for small business.

NO MORE FILING GYMNASTICS!

NEW MOSLER REVO-FILE obsoletes all other systems

Only Mosler's Revolutionary rotary active card file can: *Cut reference time to 1½ seconds.* Revo-File makes flap-flipping and tub-tugging old-fashioned. One quick spin gives you your card. *Save 500% in space.* Mosler Revo-File contains five times as many cards as other systems hold in the same space. *Reduce all finding locations to just one.* Clerks work comfortably seated. Revo-File brings the cards to them! The one finding location is at the top of the drum. *Save $200 in changeover costs.* Just take present cards and drop them into Revo-File. No hole-punching! No extra work! It's amazing! Send coupon today.

NEW **MOSLER** REVO-FILE

the modern rotary card file . . .
another fine product of The Mosler Safe Co.

REVO-FILE DIVISION • THE MOSLER SAFE CO.
Department DR-258, 320 Fifth Avenue, New York 1, N. Y.

Gentlemen: I have 2,500 or more cards and—

☐ **I am interested in a free 30-day office trial of Mosler Revo-File.** ☐ **I am interested in additional information on Mosler Revo-File.**

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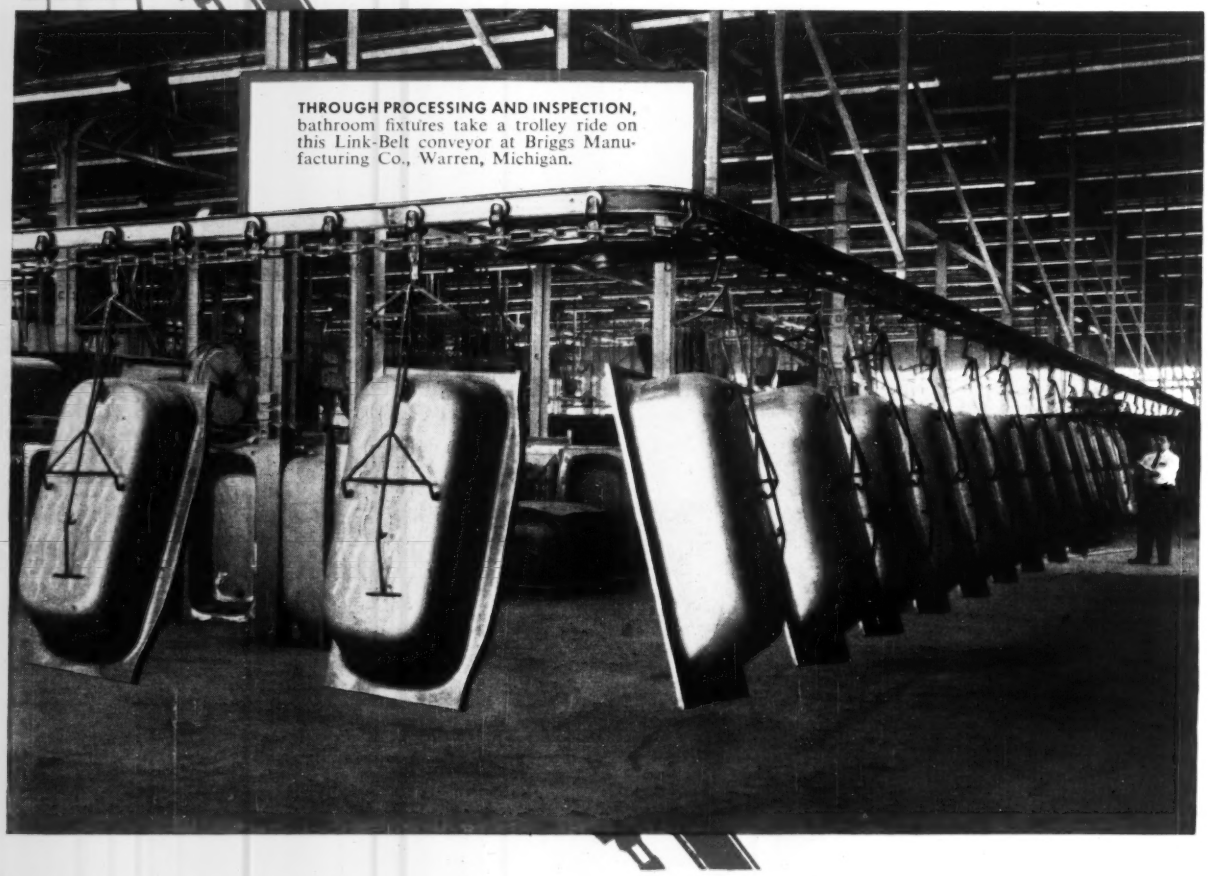
LINK-BELT Trolley Conveyors...



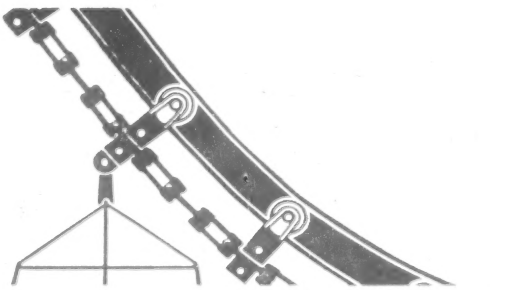
THROUGH PROCESSING AND INSPECTION, bathroom fixtures take a trolley ride on this Link-Belt conveyor at Briggs Manufacturing Co., Warren, Michigan.

link scattered processes in straight-line sequence

IF you are losing production hours because of delays in the transfer of materials between operations, you stand to profit significantly with a Link-Belt trolley conveyor system. Like a suspended superhighway, it connects wide-spread plant areas . . . assures a continuous flow of material.

Whether you handle eggs or auto frames, a Link-Belt trolley conveyor can meet any challenge your product or plant layout may offer. It can hug the ceiling to leave floor areas clear and clean . . . dive down to work stations . . . connect floors or buildings. And it permits storage, processing and assembly en route.

Having a close association with the development of trolley conveyors and with the experience of hundreds of installations, Link-Belt has undoubtedly overcome problems much like yours. Call your nearby Link-Belt office today for consultation. Or write for Book 2330.



LINK-BELT

TROLLEY CONVEYORS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants and Sales Offices in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,759

THE TREND OF BUSINESS

- *Final Demand Steady*
- *Retailers Worried*
- *Construction Strong*
- *Prices Likely to Advance*

COMPASS POINTS ON PAGES 20 AND 21

Readjustment: on schedule

To date, the setback in business has followed the pattern sketched in last month's forecast (DR&MI, January 1958, page 20). As expected, last Autumn gross national product fell off about $6 billion from its Summer total of $439 billion (seasonally adjusted annual rate—see Compass Point 20). This is the first quarter-to-quarter dip since the second half of 1953. With physical output and employment off too, the seasonally adjusted rate of unemployment rose significantly. Corporate profits were also down (Compass Point 15).

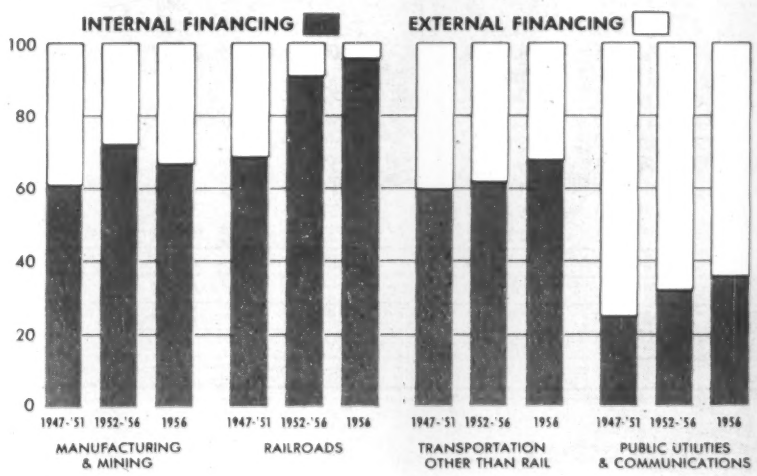
All this adds up to a definite dip in the closing quarter of 1957. In assessing prospects, however, the size of the decline is of less interest than its character. Understandably, most attention has been paid to the changes in output and joblessness. The Federal Reserve Board index of industrial production slid from 145 in August to 136 in December. Over the same period (seasonally adjusted) unemployment rose from 4.2 per cent to 5.2 per cent of the civilian labor force. Much more significant, however, has been the behavior of final demand. Roughly five-sixths of the total drop in GNP reflected a shift in the movement of stocks. Last Summer, sellers were adding to inventory at a seasonally adjusted rate of $2 billion a year; in the Fall, they were liquidating their holdings at an annual rate of about $3 billion. Meanwhile, buying for final use held its own very well. Government outlays increased a bit (a rise in buying by states and localities outweighed a further decrease in defense spending). Only marginal declines took place in outlays for plant and equipment (Compass Point 19) and consumer buying. Further reduction in our export balance was just about offset by a rise in housing value put in place. With so much stability in basic purchases, the cut in output quickly reversed the inventory trend, which was its object.

Upturn near

This whole pattern now suggests that the current readjustment will be less serious than earlier postwar shakedowns. Even though stocks will doubtless drop still further, their rate of decrease—the key factor—is unlikely to get much, if any, steeper and should slacken in a few months. As yet nothing suggests that, *on balance*, other segments of dollar demand will be off more than slightly this quarter or fail to turn upward next Spring.

To see why a milder attack seems

PERCENT DISTRIBUTION OF CORPORATE SOURCES OF FUNDS



Over the postwar period, heavy corporate capital spenders have increasingly relied on internal sources to finance fixed capital and inventory investment. In all major lines (including trade, not shown at left), such corporations met a smaller proportion of total needs from external sources in 1952–56 than in 1947–51. And the 1956 proportion fell below every preceding postwar year except 1949, 1953, and 1954, which were not fully prosperous. With demand for inventory and outlays for plant and equipment declining, depreciation charges rising, and post-tax profits dipping only moderately, dependence on external funds in 1958 should be reduced below the 1956 ratio in all fields, except possibly in utilities. This reduction should in fact be substantial (except, of course, in railroads). It will probably hold even if cash dividends are maintained or (as in 1949 and 1954) increased somewhat. (Source of historical data: Herman I. Liebling, "Financing the Expansion of Business," *Survey of Current Business*, September 1957.)

39 COMPASS POINTS OF BUSINESS . . . .

CENSUS

Population rise sets new record due to increase in births

	1 POPULATION *Millions*	2 NAMES IN REFERENCE BOOK *Thousands*
'57 IV	172.4	2,680
'57 III	171.7	2,667
'57 II	170.9	2,658
'57 I	170.2	2,659
1957	171.2	2,680
1956	168.2	2,645
1955	165.3	2,640
1954	162.4	2,639
1953	159.6	2,673
1952	157.0	2,643
1951	154.4	2,614
1950	151.7	2,692
1949	149.2	2,684
1948	146.6	2,555
1947	144.4	2,410
1946	141.3	2,146
1939	130.9	2,116
1932	124.8	2,077
1929	121.8	2,213
1919	105.1	1,711
1914	99.1	1,655

EMPLOYMENT

With job opportunities growing less rapidly than the civilian labor force, unemployment rose moderately last year

	3 EMPLOYMENT Civilian *Millions*	4 EMPLOYMENT Agricultural *Millions*	5 EMPLOYMENT Nonagricultural *Millions*	6 UNEMPLOYMENT *Millions*
'57 IV	65.3	6.0	59.3	2.8
'57 III	66.7	7.0	59.6	2.5
'57 II	65.6	6.7	58.9	2.7
'57 I	63.5	5.2	58.3	2.8
1957	65.3	6.2	59.0	2.7
1956	65.0	6.6	58.9	2.6
1955	63.2	6.7	56.5	2.7
1954	61.2	6.5	54.7	3.2
1953	61.9	6.5	55.4	1.6
1952	61.3	6.8	54.5	1.7
1951	61.0	7.1	54.0	1.9
1950	60.0	7.5	52.5	3.1
1949	58.7	8.0	50.7	3.4
1948	59.4	8.0	51.4	2.1
1947	58.0	8.3	49.8	2.1
1946	55.2	8.3	46.9	2.3
1939	45.8	9.3	35.6	9.5
1932	38.9	9.7	28.0	12.1
1929	47.6	10.0	36.3	1.5
1919	42.0	10.5	31.5	....
1914	37.6	11.4	26.2	....

PRICES

While nonfood wholesale prices stabilized last Fall, basic living costs rose as rents and charges for services advanced uninterruptedly

	7 CONSUMERS' PRICES 1947–1949 = 100 *Index*	8 RETAIL PRICES 1935–1939 = 100 *Index*	9 WHOLESALE PRICES 1947–1949 = 100 *Index*	10 INDUSTRIAL STOCK PRICE AVERAGES *Dollars*
'57 IV	121.5	217.3	118.1	439.02
'57 III	121.0	217.6	118.2	491.50
'57 II	119.7	215.6	117.2	497.00
'57 I	118.6	214.6	116.9	475.17
1957	120.2	216.3	117.6	475.67
1956	116.2	211.1	114.3	493.01
1955	114.5	208.0	110.7	442.70
1954	114.8	208.6	110.2	333.91
1953	114.4	209.1	110.1	275.96
1952	113.5	210.4	111.6	270.76
1951	111.0	206.8	114.8	257.64
1950	102.8	189.0	103.1	216.31
1949	101.8	187.7	99.2	179.48
1948	102.8	192.7	104.4	179.95
1947	95.5	180.1	96.4	177.58
1946	83.4	155.2	78.7	191.65
1939	59.4	99.0	50.1	142.66
1932	58.4	.....	42.8	64.57
1929	73.3	120.9	61.9	311.24
1919	74.0	.....	88.1	99.78
1914	42.9	.....	43.3	81.03

SALES

Higher price-tags accounted for most of the rise in business sales to an all-time peak. Last year's large export balance reflects big oil shipments in the Winter and Spring months

	21 FARM RECEIPTS *Billion $*	22 EXPORTS *Million $*	23 IMPORTS *Million $*	24 RETAIL SALES *Million $*	25 WHOLESALE SALES *Million $*	26 MANUFACTURING SALES *Million $*
'57 IV	10.0	5,040	3,060	53,736	34,200	83,400
'57 III	8.3	4,911	3,196	50,727	34,300	84,430
'57 II	6.3	5,463	3,205	50,761	33,900	86,404
'57 I	6.5	5,443	3,237	44,586	32,900	86,612
1957	31.1	19,826	12,698	199,820	135,300	340,846
1956	30.5	19,076	12,474	189,729	135,600	332,534
1955	29.5	15,510	11,390	183,851	127,200	316,087
1954	30.0	15,059	10,205	169,135	116,400	282,358
1953	31.4	15,698	10,875	169,094	117,600	294,175
1952	32.8	15,177	10,714	162,353	115,200	276,548
1951	33.2	15,030	10,967	156,548	112,800	266,460
1950	28.7	10,275	8,852	143,689†	100,800	231,415
1949	28.1	12,051	6,622	130,721	86,400	196,997
1948	30.5	12,653	7,124	130,521	95,172	211,560
1947	30.0	14,430	5,756	119,604	87,263	191,010
1946	25.5	9,738	2,942	102,488	71,915	151,402
1939	8.6	3,177	2,318	41,042	26,244†	61,340
1932	4.7	1,611	1,323	25,013	.....	30,774
1929	11.3	5,241	4,399	48,459	37,814	70,262
1919	14.5	7,920	3,904	36,549	.....	60,509
1914	6.0	2,114	1,789	.....	.....	.....

INVENTORIES

The book value of stocks held by manufacturers increased again in 1957, due in good part to a rise in replacement costs

	27 RETAIL INVENTORIES *Million $*	28 WHOLESALE INVENTORIES *Million $*	29 MANUFACTURING INVENTORIES *Million $*
'57 IV	22,860	12,600	53,800
'57 III	24,270	12,800	53,581
'57 II	23,840	12,500	54,043
'57 I	24,340	13,000	53,670
1957	22,860	12,600	53,800
1956	22,400	13,800	52,515
1955	22,440	11,400	46,572
1954	22,090	10,400	43,310
1953	21,208	10,500	45,736
1952	20,234	10,000	44,442
1951	19,904§	9,700§	43,123§
1950	18,699	9,100	34,534
1949	14,570	7,600	29,038
1948	15,190	8,100	31,782
1947	13,372	7,600	29,032
1946	11,231	6,600	24,620
1939	5,285	3,075†	11,516
1932	.....	2,307	7,332
1929	7,298	4,024	12,775
1919	.....	.....	12,096
1914	.....	.....	.....

Footnotes

†Figures for this and prior dates are from another source and are not strictly comparable with later data.
‡Beginning in 1937 tax refunds are deducted from receipts and are not included among the expenditures.
Sources of the statistical data appear on page 27.

. . . . A RECORD OF BUSINESS ACTIVITY

INCOME

Spendable consumer income failed to keep pace with price and population changes—although prices did not rise enough to protect profit margins

11 WEEKLY HOURS Indus. Workers *Hours*	12 WEEKLY EARNINGS Indus. Workers *Dollars*	13 DISPOSABLE PERSONAL INCOME *Billion $*	14 DISPOSABLE INCOME[1] Per Capita *1956 Dollars*	15 CORPORATE PROFITS AFTER TAXES *Billion $*	
39.3	82.80	301.4•	1,673•	19.9•	IV
39.9	82.73	302.9•	1,695•	20.5•	III '57
39.8	82.06	299.3•	1,704•	20.5•	II
40.2	82.34	295.5•	1,701•	21.5•	I
39.8	82.48	298.8	1,693	20.6	1957
40.4	79.99	287.2	1,708	22.0	1956
40.7	76.52	270.2	1,660	21.5	1955
39.7	71.86	254.4	1,585	16.4	1954
40.5	71.69	250.2	1 592	16.7	1953
40.7	67.97	236.7	1,548	16.1	1952
40.7	64.77	226.1	1,534	18.7	1951
40.5	59.33	206.1	1,536	22.1	1950
39.2	54.92	188.2	1,439	15.8	1949
40.1	54.14	187.6	1,445	20.3	1948
40.4	49.97	169.0	1,425	18.2	1947
40.4	43.82	159.2	1,568	13.4	1946
37.7	23.86	70.4	1,053	5.0	1939
38.3	17.05†	48.7	776	−3.4	1932
44.2	25.03	83.1§	1,081§	8.3§	1929
46.3	22.08	63.5	949	5.7	1919
49.4	11.01	33.2	908	1.9	1914

PRODUCTION

Both total output and capital spending hit new highs while industrial production held its own last year, but all were receding at year-end

16 INDUSTRIAL PRODUCTION (PHYSICAL) *Index*	17 ELECTRIC POWER PRODUCTION *Billions kwh*	18 BUILDING PERMITS 120 Cities *Million $*	19 EXPENDITURES FOR PLANT & EQUIPMENT *Billion $*	20 GROSS NATIONAL PRODUCT *Billion $*	
139*	180.6	1,004	37.5•	433.0•	IV
144*	182.2	1,280	37.8•	439.0•	III '57
143*	175.6	1,328	37.0•	434.3•	II
146*	178.1	1,110	36.9•	429.1•	I
143	716.5	4,722	37.3	433.9	1957
143	682.5	4,826	35.1	414.7	1956
139	624.8	4,571	28.7	391.7	1955
125	544.6	4,143	26.8	360.7	1954
134	516.5	4,034	28.3	363.2	1953
124	463.1	3,523	26.5	345.2	1952
120	432.3	3,654	25.6	328.2	1951
112	388.7	4,466	20.6	285.1	1950
97	345.6	3,131	19.3	257.3	1949
104	336.8	3,111	22.1	257.3	1948
100	307.4	2,470	20.6	232.2	1947
90	269.6	2,089	14.8	209.2	1946
58	161.3	1,029	5.5	91.1	1939
31	99.4	336	2.6	58.5	1932
59	116.7	2,490	9.2	104.4§	1929
39	.....	1,181	....	77.9	1919
33	.....	735	....	38.5	1914

FEDERAL

Federal debt was pressing on legal ceiling at year-end

30 FEDERAL RECEIPTS *Billion $*	31 FEDERAL SPENDING *Billion $*	32 GROSS FEDERAL DEBT *Billion $*	
13.9	18.2	274.9	IV
15.4	17.9	274.5	III '57
21.2	18.1	270.6	II
21.7	17.4	275.1	I
72.2	71.6	274.9	1957
70.9	67.2	276.7	1956
63.4	66.1	280.8	1955
61.2	64.9	271.3	1954
63.8	73.0	266.1	1953
64.8	70.0	259.1	1952
53.0	56.3	255.2	1951
37.3	37.7	257.4	1950
37.5	41.1	252.8	1949
40.9	35.6	252.3	1948
40.4	38.0	258.3	1947
38.6	41.1	269.4	1946
5.0	8.9	40.4	1939
6.9	4.7	19.5	1932
3.9	3.1	16.9	1929
5.1	18.4	25.5	1919
0.7	0.7	1.2	1914

FINANCE

Restrictive Federal Reserve Board policy spelled higher interest rates, reduction in money supply, and slower growth in consumer and business credit in 1957

33 CONSUMER CREDIT Outstanding *Billion $*	34 LOANS OF COMMERCIAL BANKS *Billion $*	35 CURRENCY OUTSIDE OF BANKS *Billion $*	36 DEMAND DEPOSITS ADJUSTED *Billion $*	37 INTEREST ON BUSINESS LOANS *Per cent*	
44.8	93.9	28.5	109.7	5.00	IV
43.2	93.4	27.8	105.5	4.83	III '57
42.2	93.3	27.8	105.6	4.40	II
40.5	90.6	27.4	105.2	4.38	I
44.8	93.9	28.5	109.7	5.00	1957
41.9	90.3	28.3	111.4	4.38	1956
38.6	82.6	28.3	109.9	3.93	1955
32.3	70.6	27.8	106.6	3.55	1954
31.2	67.6	28.1	102.5	3.69	1953
27.4	64.2	27.5	101.5	3.50	1952
22.6	57.7	26.3	98.2	3.10	1951
21.4	52.2	25.4	92.3	2.70	1950
17.3	43.0	25.4	85.6	2.70	1949
14.4	42.5	26.1	85.5	2.50	1948
11.6	38.1	26.5	87.1	2.10	1947
8.4	31.1	26.7	83.3	2.10	1946
7.2	17.2	6.4	29.8	2.10	1939
3.6	21.8	4.7	15.7	4.71	1932
6.4	35.7	3.6	22.8	5.83	1929
.....	22.4	3.6	17.6	6.58	1919
.....	13.2	1.5	10.1	....	1914

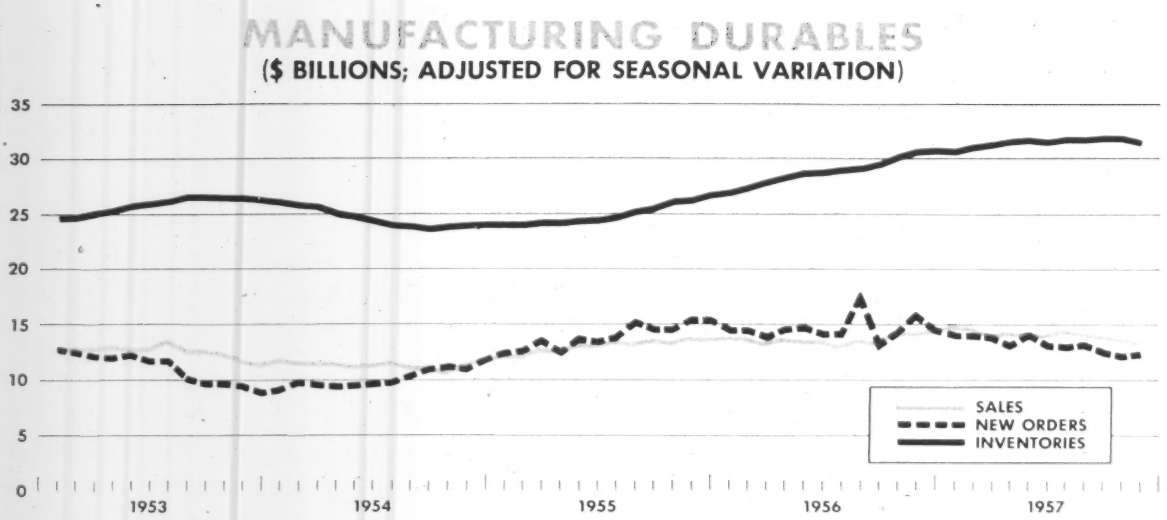
FAILURES

Failures were up over 6 per cent, but average liability rose only a bit

38 BUSINESS FAILURES *Number*	39 LIABILITIES OF FAILURE *Million $*	
3,375	145.7	IV
3,275	132.7	III '57
3,459	161.6	II
3,630	175.3	I
13,739	615.3	1957
12,686	562.4	1956
10,969	449.3	1955
11,086	462.6	1954
8,862	394.2	1953
7,611	283.3	1952
8,058	259.4	1951
9,162	248.3	1950
9,246	308.1	1949
3,252	234.6	1948
3,476	204.6	1947
1,430	67.3	1946
14,768	182.5	1939
31,822	928.3	1932
22,909	483.3	1929
6,451	113.3	1919
18,280	357.9	1914

•Annual rate seasonally adjusted.
*Quarterly figures seasonally adjusted.

§Series revised from this date.
Fourth quarter figures for most series are based upon preliminary estimates and incomplete data.



SOURCE: U.S. DEPARTMENT OF COMMERCE

likely this time, it is helpful to compare recent and prospective developments with the 1953–54 pattern in manufacturing durables – a field where much of the inventory (and other) trouble lay then and lies now. In July 1953—the peak for sales and output—producers had a huge backlog. But bookings had been running below shipments for several months (see chart above), and stocks were widely thought to be on the high side. Because of post-Korea cuts in defense and other needs, orders continued to drop sharply until July 1954 and fell well short of sales for another half-year or so. Only by heavy drafts on backlog and a sizable cut in output were producers able to hold the fall in sales to modest limits and liquidate stocks appreciably. (Unfilled orders fell about three-eighths between July 1953 and July 1954. Over the same period, the FRB index for durables fell about 15 per cent.)

The current readjustment in durables has so far been markedly different in major respects. At the high point for sales and output (around year-end 1956), unfilled orders were somewhat below their peak 1953 level. But new bookings had been exceeding sales in the second half of 1956. Furthermore, stocks were in somewhat better balance with expected needs than in the Summer of 1953. And despite curtailment of new defense business, bookings did not run substantially below sales until midyear. In consequence, by a year or so after high tide for output and sales, the backlog had fallen (proportionately) only around three-fifths, sales perhaps three-quarters, and output about four-fifths as much as in the like period of 1953–54. Yet producers had been able to switch over to inventory liquidation at a substantial rate.

Since in the 1953–54 decline output had hit bottom, and the sales rate had fallen about four-fifths of the way to its low by mid-Summer 1954, this comparison of periods is partly deceptive. But it is a good bet that the current dip will be less steep than the earlier one in sales, though perhaps not in output. Deliveries of machinery and some other items will drop significantly for several quarters, but backlogs for durables as a whole are big enough, relative to the recent spread between shipments and orders, to check the fall in overall sales and output soon, unless total new bookings fail to revive. Since the rate of ordering for inventory is unlikely to drop further and orders for defense hard goods are picking up, new bookings should soon recover, if they have not already.

Construction forges ahead

Building activity wound up its biggest year on a high note. December value put in place edged up to a seasonally adjusted annual rate of about $48.6 billion. This carried the year's total to $47.3 billion, or roughly 3 per cent above the peak reached in 1956. Practically all the year-to-year improvement took place in the public area—notably, in highways. While institutional organizations and utilities scored heavy increases in the private sector, these gains were offset by a drop of over $1 billion in nonfarm homebuilding.

Prospective strength in building is among the major reasons for expecting 1958 to be a good year for business. At this writing, it appears that contract letting (F. W. Dodge data for the 48 states) in 1957 ran 3 per cent or more above its 1956 volume. Seasonally adjusted awards in recent months have not shown a downtrend, and many specialists in the field expect some rise over the near-term. Since value put in place in a given year is governed in good part by contracts let in the early part of that year and during the year before, the rise in outlays should be significant—4 to 5 per cent.

The division of spending between sectors, however, will differ sharply from that prevailing in 1957. Public outlays should advance about as much as last year: jumps for highways, nonresidential building, and housing for the Armed Forces will outweigh decreases for community utilities and in other categories. But instead of treading water again, the private sector will record a still larger gain, despite a drop in outlays for telephone and telegraph facilities, railway structures, and industrial plant, all of which rose last year. There is pessimism in some quar-

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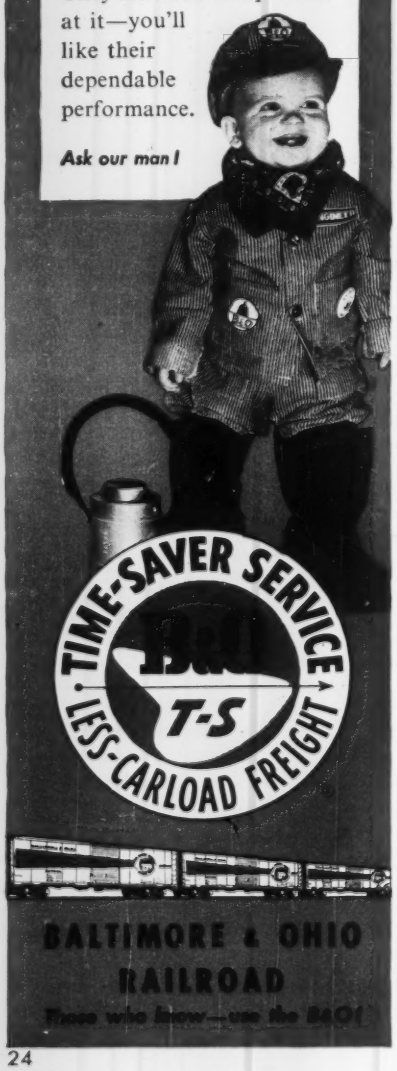

ters about commercial building, but prospects are that value put in place will, at worst, not decrease much and may easily increase. (Contract awards last November were higher than in the corresponding month of 1956, marking the fourth such comparative advance since mid-1957. This is in addition to an average gain of 8 per cent over year-ago levels in the first half of the year.) Utilities will record another big plus. Institutional building too should be up again, though not so strongly.

Finally, the 1957 laggard—private nonfarm residential construction—should rise at least moderately. Housing value put in place rose in December, for the sixth straight month, to a seasonally adjusted rate of more than $500 million above its 1957 average. Further improvement over the next several months seems assured. The number of starts in second half 1957 averaged over 1 million at the seasonally adjusted annual rate, and contract awards (public plus private) were up over year-ago levels nearly 7 per cent in units and over 8 per cent in dollar volume in the period September–November.

At present, the advance appears likely to carry on beyond next Spring. With over-all credit looser, funds from mortgage repayments larger, more savings available for mortgages, and a decline in business need for external finance, money will be much less of a problem. Several

BUSINESS SIGNPOSTS

1939 Average	1947 Average	Selected WEEKLY Indicators†	Latest Week	Previous Week	Year Ago
102	163	**STEEL INGOT PRODUCTION** Ten Thousand Tons (a)	150	154	247
25	49	**ELECTRIC POWER OUTPUT** Ten Million KW Hours (b)	124	125	126
76	121	**BITUMINOUS COAL MINED** Hundred Thousand Tons (c)	87	70	103
69	92	**AUTOMOBILE PRODUCTION** Thousand Cars and Trucks (d)	133	138	168
35	98	**DEPARTMENT STORE SALES** Index 1947–1949 = 100 (e)	103	108	100
5	13	**BANK CLEARINGS, 26 Cities** Hundred Million Dollars (f)	116	109	115
284	67	**BUSINESS FAILURES** Number of Failures (f)	260	324	278

1939 Average	1947 Average	Selected MONTHLY Indicators‡	Latest Month	Previous Month	Year Ago
58	100	**INDUSTRIAL PRODUCTION** Index 1947–1949 = 100 (e)	136	139	147
58	95	**NONFARM COMMODITY PRICES** Index 1947–1949 = 100 (g)	126.0	125.9	124.7
37	100	**FARM COMMODITY PRICES** Index 1947–1949 = 100 (g)	92.6	91.9	88.9
59.4	95.5	**CONSUMERS' PRICE INDEX** Index 1947–1949 = 100 (g)	121.6	121.6	118.0
3.5	10.0	**RETAIL SALES** Billions of Dollars (h)	19.7	17.1	19.4
5.4	15.6	**MANUFACTURERS' SALES** Billions of Dollars (h)	27.5	29.5	28.8
45.8	58.0	**EMPLOYMENT** Millions of Persons (h)	64.4	64.9	64.3
72.9	190.5	**PERSONAL INCOME** Billions of Dollars, seasonally adjusted annual rate (h)	342.8	345.5	334.8
103	257	**BUILDING PERMIT VALUES** Millions of Dollars (f)	392.0	380.8	386.0

SOURCES: (a) Amer. Iron & Steel Inst.; (b) Edison Elect. Inst.; (c) U.S. Bureau of Mines; (d) *Automotive News*; (e) Federal Reserve Board; (f) DUN & BRADSTREET, INC.; (g) U.S. Bureau of Labor Statistics; (h) U.S. Department of Commerce. †WEEKLY INDICATORS: Steel data for fourth week of January; bituminous coal data for second week; all others for third week. ‡MONTHLY INDICATORS: Manufacturers' sales for November; all others for December.

steps to ease the position still further have recently been taken by the Federal Housing Administration and the Federal National Mortgage Association. For the year as a whole, private starts should total 1.06 million units, or roughly 70,000 more than in 1956, with the year-end rate running over 1.1 million. In addition, homeowners' outlays both for major additions and alterations of existing properties and for related nonhousekeeping purposes should increase substantially.

Retailers: gloom justified?

Ever since business began to soften, there has been widespread concern about prospects for consumer outlays. All things considered, the trend to date appears fairly encouraging. Last Fall, forecasters' "contingencies" all broke the wrong way. The blows to retail trade dealt by bad weather, the flu, and a big stock market setback were compounded in December by transportation strikes. In additional, spendable income dropped marginally. Nevertheless, October and November sales, after allowance for seasonal influences and a later Thanksgiving, were not down much from the phenomenal rates achieved last Summer, running more than 3 per cent higher than in the corresponding period of 1956. Advance estimates indicate that December volume not only set a new record for that month but, on a seasonally adjusted basis, reversed the downtrend initiated last August, at least temporarily. And preliminary reports suggest that the post-Christmas season got off to a pretty good start. DUN & BRADSTREET's regular check of retail sales in 66 cities showed gains over 1957's relatively high volume in the weeks ending January 8, 15, and 22, despite sluggish car sales during the period January 1–10. Department store sales averaged around 2 per cent above year-ago level in the weeks ending January 4 and 11.

In the light of these developments, it is surprising to find many retailers taking a dim view of near-term prospects. Nothing in the record appears to require a change in the estimate of first-half 1958 consumer outlays for goods that was implicit in last month's economic forecast. The prospect then was for approximate stability in the (seasonally adjusted) dollar total for the period as a whole, with spending slightly down from its Autumn rate this quarter and about even in the Spring. (*Total* consumer spending will about hold to its fourth-quarter pace this Winter and rise a bit in the Spring, but only as a result of increasing outlays for services.)

To buy or not to buy

Unfortunately, however, persistently gloomy expectations could depress total demand a bit further during the next six months by affecting the rate of over-all inventory reduction. The forecast had assumed that with few major exceptions—principally autos—end-of-1957 retail stocks would be low enough to dictate some accumulation before mid-1958, even though sales might fall off moderately. By historical standards, this judgment appears valid. Retailers as a whole probably went into 1958 with a seasonally corrected stock-sales ratio of about 1.46—about one-eighth below that of late Summer 1953. Stocks were no doubt too high in Summer 1953, but by nothing like this margin. Indeed, at the close of 1957, retailers' holdings were significantly lower in physical terms (and at most only a shade higher in terms of book value) than in early 1956, although on a seasonally adjusted basis dollar sales had increased at least 10 per cent during the interim.

Nonetheless, several recent surveys show that sellers other than car dealers plan on balance to pare stocks a little more this Winter and Spring. The odds are still that they will not do this for more than a few months, if at all (additions to inventory will be less difficult to finance as credit eases.) In that event, retail stocks (nonauto) ought to be on the upgrade by next Spring. (So would stocks of autos if efforts to prevent a build-up of car inventories this quarter overshoot and dealers go into the second quarter without adequate insurance against a possible strike.) But mild liquidation remains a troublesome possibility.

So far, the slowdown in demand has operated merely to arrest, not to reverse, basic price trends. The Bureau of Labor Statistics wholesale commodity price index, after sliding down from its peak of 118.4 in August to 117.7 in October, swung

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around in November and probably reached new high ground in January.

Although most of the latest rise took place in farm and food items, the nonfarm and nonfood product segment of the index edged up too, and in mid-January seems to have returned to the peak level reached last Summer. The consumer price index rose sharply to a new high in November and stood firm at this point in December. The Commerce Department's composite index of construction costs apparently remained around its historical peak through year-end. Going into the new year, most of the major indexes thus stood at or close to their all-time highs.

Outlook: modest advance

What of 1958? Prospects are not entirely clear, but the odds are that the year will witness another general, although milder, advance. Doubtless, demand has temporarily lost enough steam to prevent basic pressures from consistently overriding ordinary seasonal fall-offs in some indexes. Also, fewer items will be on the rise nonseasonally. But with the evident strength of over-all levels in the face of what may already have been the worst of the break in activity, the consumer price index seems certain to move up again. Food costs should not change much one way or the other, but higher charges are inevitable in the service lines—transportation, other utilities, housing, medical expenses, and so on. And both state and local governments will be imposing more general sales taxes and other excises. On balance, some increase is likely in other price sectors, too. The prospective pick-up in spending will underpin prices of some primary products. With profit margins already squeezed and wage increases (some already written into contracts) equaling or exceeding probable gains in man-hour output likely in many lines next Spring and Summer, producers of other items will have a strong incentive to put on higher

This is a report prepared in the Business Economics Department, DUN & BRADSTREET, INC., by Edwin B. George and Robert J. Landry.

price tags once demand begins to advance again. (In late December, members of the National Association of Purchasing Agents' Business Survey Committee reported that "a desire on the part of many of their suppliers to raise prices" was being checked by the then-prevailing soft order position. This constraint will of course weaken when buying strengthens.) The best guess perhaps is that, net of seasonal influences, the trend will be slightly upward from late Winter to midyear and up more strongly in the second half of 1958.

Sources for Compass Points
pages 20 and 21

CENSUS, 1. POPULATION: *U.S. Bureau of the Census;* 2. NAMES IN REFERENCE BOOK: *Dun & Bradstreet, Inc.*

EMPLOYMENT 3. CIVILIAN; 4. AGRICULTURAL; 5. NONAGRICULTURAL; 6. UNEMPLOYMENT: *U.S. Bureau of the Census*

PRICES 7. CONSUMERS' PRICES: *U.S. Bureau of Labor Statistics;* 8. RETAIL PRICES: *U. S. Office of Business Economics;* 9. WHOLESALE PRICES: *U.S. Bureau of Labor Statistics;* 10. INDUSTRIAL STOCK PRICE AVERAGES: *Dow Jones & Company.*

INCOME 11. WEEKLY HOURS; 12. WEEKLY EARNINGS OF INDUSTRIAL WORKERS: *U.S. Bureau of Labor Statistics;* 13, 14: DISPOSABLE INCOME; 15. CORPORATE PROFITS AFTER TAXES: *U.S. Office of Business Economics*

PRODUCTION 16. INDUSTRIAL PRODUCTION (PHYSICAL): *Federal Reserve Board;* 17. ELECTRIC POWER PRODUCTION: *Federal Power Commission;* 18. BUILDING PERMITS, 120 CITIES: *Dun & Bradstreet, Inc.;* 19. EXPENDITURES FOR PLANT AND EQUIPMENT: *U.S. Department of Commerce and Securities & Exchange Commission;* 20. GROSS NATIONAL PRODUCT: *U.S. Office of Business Economics*

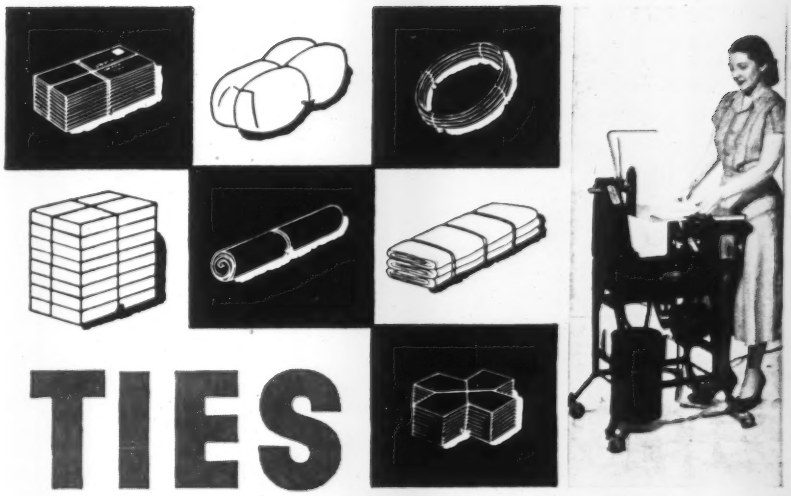
SALES 21. FARM INCOME: *U.S. Bureau of Agricultural Economics;* 22. EXPORTS; 23. IMPORTS: *U.S. Bureau of the Census;* 24. RETAIL SALES; 25. WHOLESALE SALES; 26. MANUFACTURING SALES: *U.S. Office of Business Economics*

INVENTORIES 27. RETAIL; 28. WHOLESALE; 29. MANUFACTURING: *U.S. Office of Business Economics*

FEDERAL 30. RECEIPTS; 31. EXPENDITURES; 32. GROSS FEDERAL DEBT: *U.S. Treasury Department*

FINANCE 33. CONSUMER CREDIT; 34. LOANS OF COMMERCIAL BANKS; 35. CURRENCY OUTSIDE OF BANKS; 36. DEMAND DEPOSITS ADJUSTED; 37. COMMERCIAL LOAN RATES: *Federal Reserve Board*

FAILURES 38. BUSINESS FAILURES; 39. LIABILITIES: *Dun & Bradstreet, Inc.*



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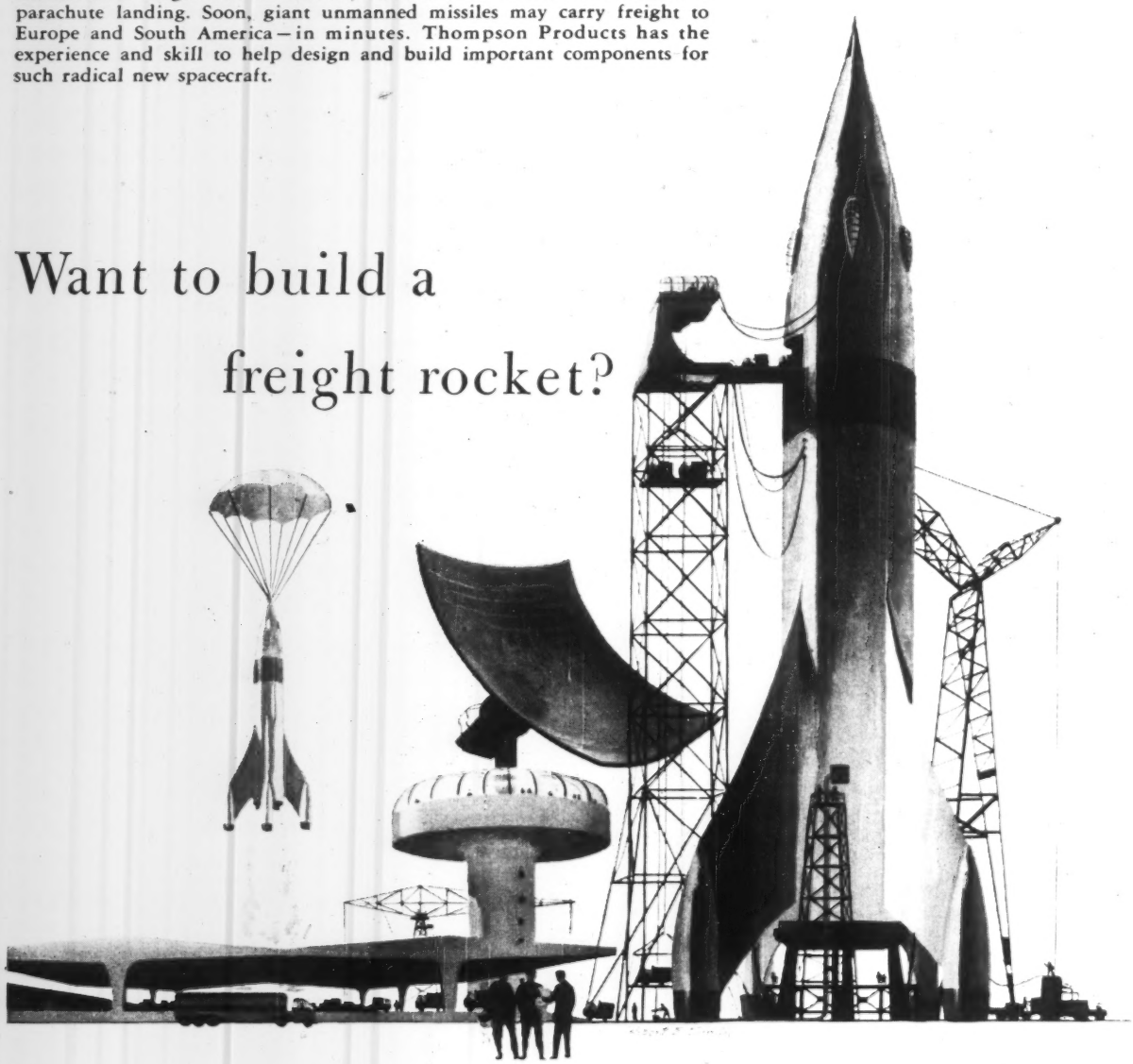

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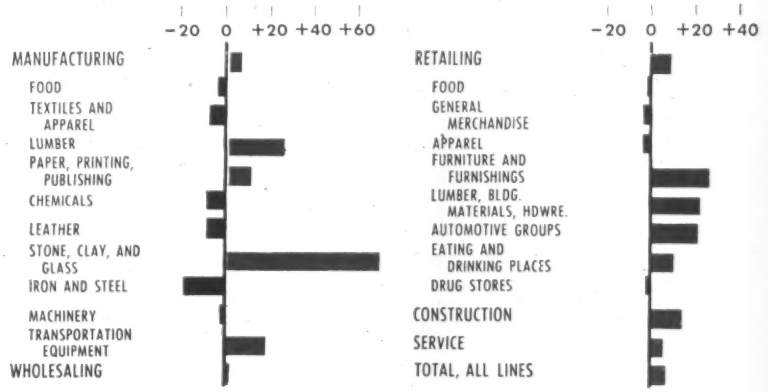
FAILURE TRENDS BY INDUSTRIES AND TRADES
PER CENT CHANGES IN NUMBER • 1956-1957



FAILURES: 1957 Total Hits Postwar High

ALTHOUGH seasonally down in December to 1,080, the number of business failures for the full year of 1957 climbed to a new postwar peak of 13,739—highest since 1939. But the rise has slackened significantly, amounting to 8 per cent in 1957, as contrasted with 16 per cent between 1955 and 1956.

Related to the growing business population, the casualty rate remains considerably less severe than in 1939. DUN'S FAILURE INDEX shows that 52 concerns failed in 1957 for every 10,000 listed in the DUN & BRADSTREET *Reference Book*. This rate has edged up from 48 a year ago, but falls well below the 70 per 10,000 recorded in 1939.

Dollar liabilities involved in the year's failures surged to $615 million, another new peak for the postwar period. Casualties of medium size accounted for the sharp rise in losses; neither very small casualties, those under $5,000, nor exceptionally large ones, in excess of $1 million, were as numerous as in the preceding year.

Businesses over ten years old continued to claim a growing portion of total failures. They comprised 9 per cent in 1947, but have edged up in each succeeding year until they accounted for 19 per cent of the total in 1957. Of course, enterprises in their first five years of operation are still predominant—60 per cent of the 1957 casualties fell in this group.

In all functions, failures exceeded 1956 levels, but the rate of increase eased appreciably in every group except manufacturing. Construction and retail businesses continued to feel the brunt of the postwar uptrend in mortality, and wholesalers again showed the least year-to-year change. In retailing, totals climbed to record levels in four trades: furniture and furnishings stores, building materials dealers, the automotive group, and eating and drinking places. On the other hand, fewer retailers in the food, general merchandise, apparel, and drug lines failed in 1957 than in 1956.

Casualties among manufacturers increased at a slightly accelerated

THE FAILURE RECORD

	Dec. 1957	Year 1957	Year 1956	% Chg.†
DUN'S FAILURE INDEX*				
Unadjusted	48.8	51.7	48.0	+ 8
Adjusted, seasonally	51.9	.....	.....	....
NUMBER OF FAILURES	1,080	13,739	12,686	+ 8
NUMBER BY SIZE OF DEBT				
Under $5,000	134	2,001	2,032	− 2
$5,000–$25,000	514	6,699	6,152	+ 9
$25,000–$100,000	347	3,847	3,431	+12
Over $100,000	85	1,192	1,071	+11
NUMBER BY INDUSTRY GROUPS				
Manufacturing	208	2,411	2,285	+ 6
Wholesale trade	96	1,236	1,207	+ 2
Retail trade	514	6,895	6,341	+ 9
Construction	174	2,105	1,834	+15
Commercial service	88	1,092	1,019	+ 7
LIABILITIES (in thousands)				
CURRENT	$45,325	$615,293	$562,697	+ 9
TOTAL	45,325	620,840	568,166	+ 9

*Apparent annual failures per 10,000 enterprises listed in the Dun & Bradstreet *Reference Book*.

†Per cent change, year 1957 from year 1956.

In this record, a "failure" occurs when a concern is involved in a court proceeding or in a voluntary action likely to end in loss to creditors. "Current liabilities" here include obligations held by banks, officers, affiliated and supply companies, or the governments; they do not include long-term publicly held obligations.

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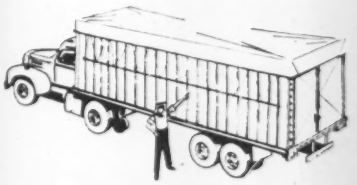

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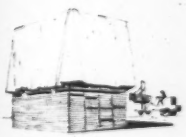

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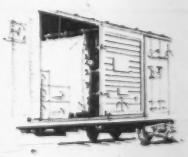

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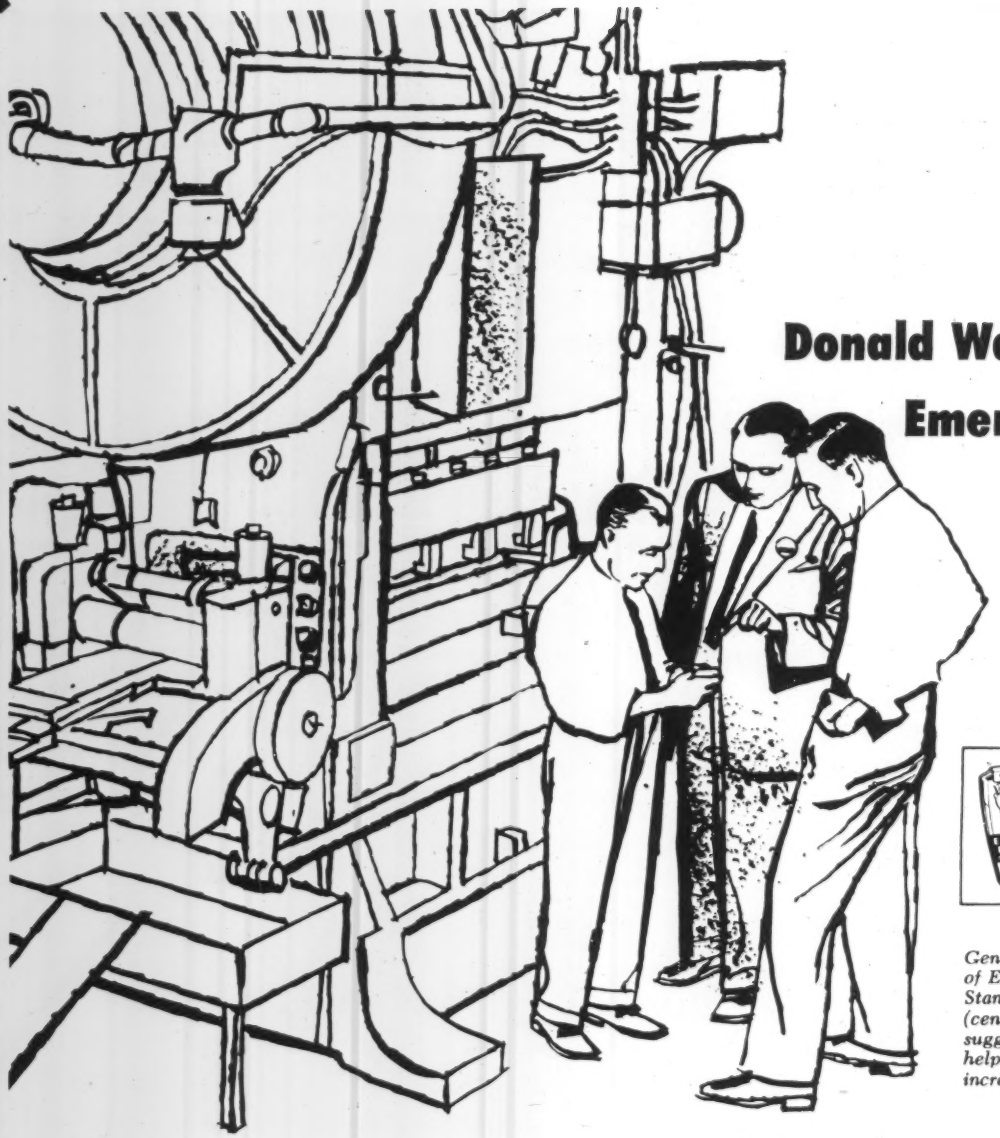

Donald Wachter helps Emerson-Electric find way to increase die life

Gene Olevitch and Gene Paul of Emerson-Electric with Standard's Don Wachter (center) inspect stamping. Don suggested lubricant that helped Emerson-Electric increase life of dies.

AN INCREASE IN LIFE of dies used in stamping laminations for electric motors was important to the people at Emerson-Electric. Grinding and replacing dies is costly.

Standard Oil's Don Wachter suggested to Emerson-Electric plant personnel that they consider a Standard Oil product, STANICUT Oil No. 62FC, as the lubricant in this stamping operation. A test was run. In one instance STANICUT Oil No. 62FC increased the number of punchings between grinds 100 per cent. In general, on stamping operations using silicon steels, an impressive 50 per cent increase in die life was achieved.

Standard men are trained to help customers like Emerson-Electric find ways to reduce costs, cut operations, extend life of tools and equipment. Don Wachter, the man on the Emerson-Electric account, is a native St. Louisan. He has been doing this sort of work at Standard Oil for six years. He has an engineering degree from Washington University and has completed Standard's Sales Engineering School.

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FAILURES BY DIVISION OF INDUSTRY

(*Current liabilities in millions of dollars*)	Number 12 months		Liabilities 12 months	
	1957	1956	1957	1956
MINING, MANUFACTURING	2411	2285	196.8	191.2
Mining—coal, oil, misc.	75	42	11.6	8.2
Food and kindred products	183	188	11.4	10.4
Textile products, apparel	500	537	30.4	34.5
Lumber, lumber products	504	401	25.1	22.9
Paper, printing, publishing	136	123	9.6	7.5
Chemicals, allied products	56	61	5.5	12.6
Leather, leather products	77	84	7.5	5.5
Stone, clay, glass products	56	33	3.0	4.7
Iron, steel and products	113	139	27.8	12.1
Machinery	254	259	27.5	30.2
Transportation equipment	76	64	8.9	5.2
Miscellaneous	381	354	28.6	37.4
WHOLESALE TRADE	1236	1207	77.9	74.7
Food and farm products	283	300	18.7	12.8
Apparel	43	49	2.5	2.2
Dry-goods	34	47	1.4	1.8
Lumber, bldg. mats., hdwre	150	147	8.8	18.1
Chemicals and drugs	47	45	2.1	1.5
Motor vehicles, equipment	74	66	3.4	3.6
Miscellaneous	605	553	41.1	34.7
RETAIL TRADE	6895	6341	186.8	156.0
Food and liquor	1096	1102	24.1	18.8
General merchandise	265	274	11.6	9.6
Apparel and accessories	1122	1161	24.5	28.8
Furniture, furnishings	1004	793	37.3	26.7
Lumber, bldg. mats., hdwre	469	380	13.7	11.3
Automotive group	885	727	24.3	22.2
Eating, drinking places	1279	1149	28.5	23.9
Drugstores	162	165	4.0	3.5
Miscellaneous	613	590	18.8	11.3
CONSTRUCTION	2105	1834	110.3	100.8
General bldg. contractors	805	708	64.4	54.1
Building subcontractors	1175	1030	36.5	41.4
Other contractors	125	96	9.4	5.3
COMMERCIAL SERVICE	1092	1019	43.4	39.9
TOTAL UNITED STATES	13,739	12,686	615.3	562.7

Liabilities are rounded to the nearest million; they do not necessarily add up to totals.

rate in 1957, lifting their total above the previous postwar high, established in 1949. Marked increases occurred in the lumber industry, transportation equipment, mining, stone, clay, and glass, but totals dipped to the lowest point in four years or more in textiles and apparel, leather, iron and steel, and machinery.

Geographically, during 1957, failures climbed to postwar records in all regions except the Mountain states, which dipped from 1956, and the New England states which, despite an 8 per cent increase, remained below their 1949 peak. The sharpest rises occurred in the West South Central and East South Central regions, which were buffeted by winds and floods in 1957. The East and West North Central states also suffered increases considerably above the national average. In Oregon, failures almost doubled, perhaps reflecting difficulties in the lumber industry. The Middle Atlantic states reported the least change for the year; New York City's total dipped.

This report was prepared in the Business Economics Department, DUN & BRADSTREET, INC., by Rowena Wyant.

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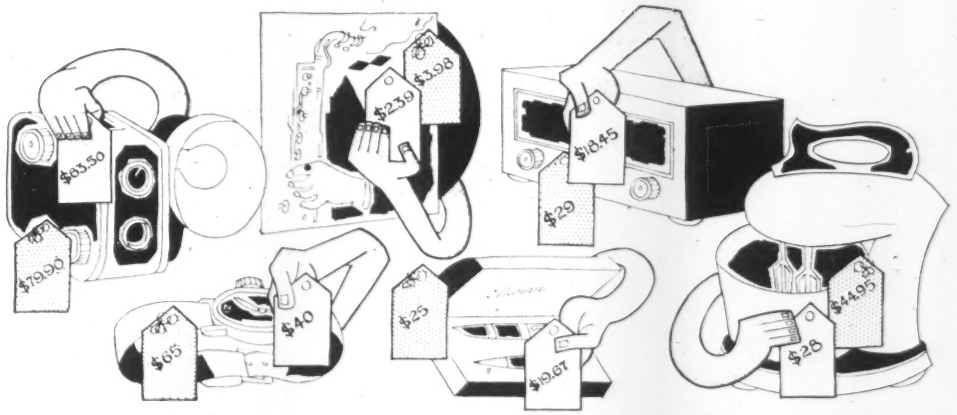


IS FAIR TRADE ON THE WAY OUT?

AARON STERNFIELD

Though it's got some life in it yet, fair trade has been losing ground steadily. And there are plenty of manufacturers who don't plan on shedding any tears at the funeral.

FAIR TRADE TODAY is in a life and death struggle for survival. The right of a retailer to sell goods at whatever price he wishes is becoming more and more firmly established in state courts. Manufacturers are either dropping fair trade policies or failing to enforce them adequately. Many retailers are flouting fair trade prices. Federal legislation that gives states the right to pass fair trade laws has yet to be brought to a test in the U.S. Supreme Court, but the High Court did strike a heavy blow against fair trade last October 14, when it refused to review an adverse decision handed down by a circuit court. The lower court held that a retailer in a non-fair-trade state may use the mails to sell goods at cut prices in fair trade states.

Another Blow

In itself, this decision will not destroy the right of a manufacturer to enforce minimum resale prices. But, coming in the wake of various state decisions against fair trade, it represents another major battle lost by the advocates of resale price maintenance.

Fair trade had its beginning during the depression of the 1930's. With money scarce and goods plentiful, merchants began slashing list prices in a desperate effort to gain sales. Price wars were the rule of the day, and many small businesses were driven to the wall.

In 1931, California passed the first fair trade law, in an effort to hold the retail price line and protect the small merchant—partly from himself. This legislation, however, had no teeth. Only those merchants who signed contracts binding them to fair trade pricing were affected.

Two years later, the controversial nonsigner's clause was incorporated into the law. This clause provides that if one retailer in a state signs a contract with a manufacturer agreeing to a minimum price for the product, all other retailers in the state who wish to stock that product must abide by that contract.

The U.S. Supreme Court has ruled that this nonsigner's clause is constitutional in intrastate commerce. However, in the *Calvert v. Schwegmann* case, the Supreme Court threw out the nonsigner's clause in interstate commerce, but without ruling against it.

More Than One Way

Many fair trade advocates admit privately that the present system of minimum resale price enforcement will not long exist in most fields. However, they feel confident that other legal methods can be used to maintain resale price minimums.

One such attempt will probably be made during this session of Congress by the American Fair Trade Council, a nonprofit organization founded in 1938 "to promote a broader understanding of the economic importance of fair trade," and supported by a group of manufacturers who practice and enforce fair trade, such as the Anderson Company, Borg-Erickson Corp., Union Underwear Company, and Shwayder Brothers, to name a few.

The AFTC concedes that the fair

trade contract system is unwieldy and that "the nonsigner clause is fair trade's Achilles's heel—both in the courts and in public relations." It admits, too, that although fair trade contracts covering both signers and nonsigners are effective in 28 states, the number of cases testing the constitutionality of fair trade is expected to increase.

Price of Enforcement

Finally, the Council points out that manufacturers are finding it difficult and costly to adjust their distribution systems to a checkerboard pattern, that it is impractical to seek corrective legislation or constitutional amendments in states where fair trade has been thrown out, and that the cost of fair trade enforcement may become prohibitive.

The AFTC has proposed an amendment to the Lanham Trademark Act, which would allow a manufacturer to license the reseller of his product, permitting him to use the manufacturer's trademark in advertising, in displays, and on the product itself.

Upon written notice, the manufacturer could revoke the license if the reseller used the product for "baiting" or "switching," if he misrepresented the product to a purchaser, or if he sold or advertised it at a price other than the one established and publicized by the manufacturer.

If the reseller's license were revoked, the manufacturer could either buy back his inventory or allow the reseller to conduct a closing-out sale within a reasonable time.

Countermove

Two public safeguards are incorporated into the proposed amendment. Similar goods for the same general purpose (but goods in which the manufacturer has no interest) would have to be available to the public before the license could be revoked. And the right of revocation could not be exercised in support of any action tending to create a monopoly or restraint of trade.

Proponents of the proposed amendment point out that one statute would be effective in 48 states, that the enforcement cost would be relatively low, and that reliance on the nonsigner clause would be eliminated.

Advocates of the proposed amendment include Fritz G. Lanham, author of the Lanham Trademark Act, who is now on the staff of the AFTC; Herbert A. Bergson, former Assistant Attorney General in charge of the Antitrust Division, Department of Justice; Elmer L. Ward, president of the Palm Beach Company; T. F. Casey, president of Tampax, Inc.; H. E. Christensen, vice president and counsel of Eversharp, Inc.; and Ivan D. Tefft of the Parker Pen Company.

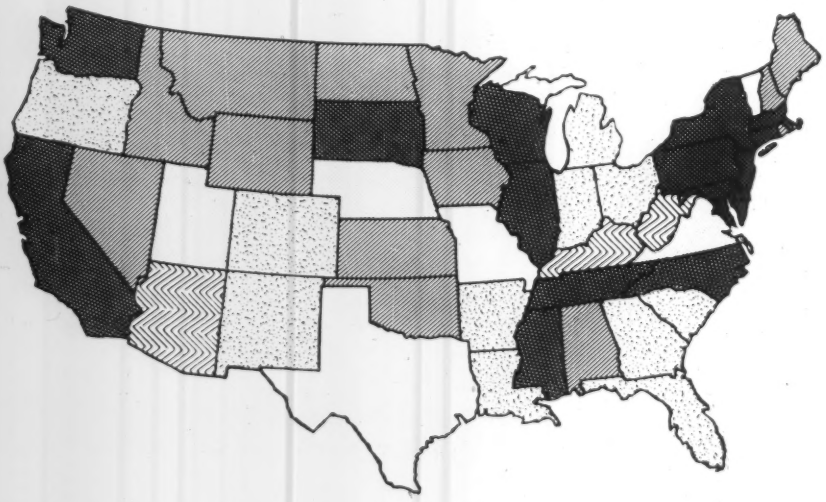
Two Kinds of Rulings

Pointing out that courts in industrial states have, in the main, upheld fair trade, and that most of its setbacks have occurred in the South and Far West, AFTC's counsel, Thomas A. Rothwell, reasons that the more sophisticated jurists rule on the right of the legislatures to pass such laws, while the others rule on the wisdom of the laws themselves.

Rothwell, who feels that the discounter has performed a service by punching holes in artificially inflated list prices, observes that the substantial discounts offered by discount houses are generally on items not fair-traded. Fair trade prices, he argues, are generally competitive and realistic, because the manufacturer must set a low enough fair trade price to give him adequate distribution. He contends that while a manufacturer may pick up sales in the short run by allowing the price of his products to be cut, the product itself becomes cheapened and, in the long run, he is liable to lose sales.

WHERE FAIR TRADE STANDS TODAY

Though the legislative tide is running against fair trade laws, the legal right to fix minimum retail prices exists in most states.



Highest state courts have upheld fair trade in fifteen states: California, Connecticut, Delaware, Illinois, Maryland, Massachusetts, Mississippi, New Jersey, New York, North Carolina, Pennsylvania, South Dakota, Tennessee, Washington, and Wisconsin.

Lower courts have handed down no adverse decisions in thirteen fair trade states: Alabama, Idaho, Iowa, Kansas, Maine, Minnesota, Montana, Nevada, New Hampshire, North Dakota, Oklahoma, Rhode Island, and Wyoming.

Unfavorable lower-court decisions have not yet been reviewed by high courts in three states: Arizona, Kentucky, and West Virginia.

Highest state courts have thrown out nonsigner clauses, thereby sharply reducing effectiveness of fair trade laws, in eleven states: Arkansas, Colorado, Florida, Georgia, Indiana, Louisiana, Michigan, New Mexico, Ohio, Oregon, and South Carolina.

High courts have nullified fair trade in three states: Nebraska, Utah, and Virginia.

There are no fair trade laws in three states: Missouri, Texas, and Vermont. (The District of Columbia is also without a fair trade law.)

Probably the most vocal of all fair trade spokesmen is Maurice Mermey, director of the Bureau of Education on Fair Trade. The Bureau, established under the auspices of the National Association of Retail Druggists, is largely supported by drug manufacturers.

According to Mermey, the adverse fair trade decisions in fourteen states do not alter the basic legality of resale price maintenance, nor will they deter the manufacturer from policing his trademark and distribution.

Mermey's position is that the retailer is selling the manufacturer's good will, and, therefore, he has the right to cut the price only if he removes the manufacturer's trademark. He asserts that the discounter who attempts to cut prices on standard brands must make up the difference on house brands, because "the only store that can make money at 6 per cent is the pushcart peddler."

Even if fair trade is thrown out in all the state courts, Mermey believes that manufacturers can maintain minimum retail prices by consignment shipping or by franchise agreements with retailers.

Small Retailer's View

John W. Dargavel, executive secretary of the National Association of Retail Druggists, puts the small retailer's case for fair trade this way:

> No storekeeper can permit a competitor to get a reputation for underselling him. The small retailer can't help himself when the price juggler puts the squeeze on him, but the big retailer certainly can and does. He will match the price juggler's "bait" prices and even drive them down further. The price war starts. Small retailers have the devil's choice: lose their customers or sell popular brands—their bread and butter—at a loss. Both roads lead to bankruptcy for small business.

The Bureau of Education on Fair Trade argues that price cutting actually hurts the consumer, because it traps him into buying unknown, overpriced merchandise and destroys his confidence in the value of established trademarks. It warns that price cutting could eventually put the consumer at the mercy of "giant retail monopolies," once the competition of small business is out of the way.

The manufacturer is also hurt by price cutting, the Bureau maintains. It points out that when a product's price is cut, the general public concludes that either the quality is slipping or the product was overpriced to begin with.

Another argument presented by the Bureau is that small retailers will often drop a brand that is being kicked around pricewise rather than sell it at a loss, and that this can mean falling sales, production cuts, and unemployment for the manufacturer.

One of the leaders in the movement against fair trade is Stephen Masters, head of a discount-house chain that grossed more than $45 million in the fiscal year ended October 1957.

Masters asserts that retailers have the right to pass along savings resulting from efficient operation to the consumer. He maintains that many people are presold on national brands. In other words, they know what they want before they enter a store and come to buy, not to be sold.

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LIFE AND TIMES OF FAIR TRADE

This date-tabbed list highlights the major skirmishes in the history of the fair trade campaign.

1931 California passed the first fair trade law as a device to protect the small retailer from price cutting. Sponsors of the measure said its purpose was to guard the manufacturer's brand name and good will.

1933 California adopted the nonsigner clause, which provides that if one retailer in the state signs a contract with a manufacturer agreeing to a minimum price for a product, all other retailers in the state are bound by that contract.

1936 In the Dearborn case, the U.S. Supreme Court ruled that California's fair trade law, with the nonsigner clause, does not violate the "due process" clause of the Fourteenth Amendment to the Constitution.

1937 The U.S. Congress passed the Miller-Tydings Act, legalizing fair trade in intrastate as well as interstate commerce.

1951 The *Calvert v. Schwegmann* case was a major setback for fair trade when the U.S. Supreme Court threw out the nonsigner clause in interstate commerce. The Court ruled that the Miller-Tydings Act does not specifically cover nonsigners of fair trade agreements.

1952 Fair trade bounced back when Congress passed the McGuire Act, which upholds the right of the states to pass fair trade laws with nonsigner clauses. The U.S. Supreme Court has not ruled on the constitutionality of this legislation.

1957 A hard blow to fair trade was the U.S. Supreme Court's decision upholding the right of an out-of-state mail-order company to sell products in fair trade states at less than fair trade minimum prices.

The legal argument for fair trade is that the manufacturer has the right to protect his brand name. Most of the favorable fair trade decisions have been predicated on this argument.

When fair trade has been thrown out by state courts, it has usually been on the ground that it has violated the "due process" clause of the Constitution, by unlawfully delegating legislative power to individuals.

Planning ahead IN PERSONNEL

JAMES MENZIES BLACK

Keeping one jump ahead of tomorrow's personnel needs and labor market conditions requires planning—and now is the time to take stock of your company's future.

A GOOD POKER player plans to win. He figures the averages, knows his competition, and senses exactly what to do and when to do it. Now and then he loses—but when he wins, which is most of the time, he wins big. It's not luck that keeps him pulling in those pots. It's shrewd analytical ability, based on a solid substructure of experience, intelligently applied.

In much the same way, the executive officers of a successful business also plan. They plan the proper approach to the solution of immediate problems as well as the long-range conduct of their operations, now more important than ever. To take advantage of opportunity, they plan flexibly. For they know it wasn't luck that put their company where it is. They also know they can't count on luck or "muddling through" to keep it at the head of the line. And in recent years, because of the increasing complexities of our economy, long-range planning has come in for more and more attention.

Naturally, a company must plan ahead in every area, but in no field is it more important than in personnel. Company growth depends on it. For unless a business has people with skill, imagination, and a capacity for leadership, its other plans may well be worthless.

The impact of automation and mechanization on industry, for example, is radically revising the nature of the work employees perform. Technological improvements make new methods obsolete almost before they are installed.

Planning Principles

Of course, the process of change is advancing more rapidly in some industries than in others. From the personnel standpoint, the kind of planning to be done depends on the nature of the company's business. But regardless of the rate of change a particular company is experiencing or expects to experience, certain principles of personnel planning hold. Neglect them and you run the risk of not having the right men on the right job ten years from now.

Obviously all aspects of personnel planning are so closely related that it is impossible to plan in one area without considering the effect of that planning elsewhere. Any other approach would be like trying to wash your hands one at a time. Salesmen, scientists, and technicians are needed, as well as engineers, production men, and researchers. Capable supervision by competent, alert executives is also necessary. All this takes careful forecasting and departmentally integrated planning, for what happens in one area will have an impact on another.

But personnel requirements for the production workforce will probably undergo the greatest or, at least, the most publicized change. Automation is altering the work habits of mankind and, consequently, is of tremendous concern to personnel management, both in the plant and in the office. About 2 million jobs are being eliminated annually by the use of better machines and more efficient methods. In many cases, these displaced people are adapting their skills to new demands or learning other skills to take advantage of different opportunities. Nevertheless, employees fear automation. Much of this fear is out of proportion to the realities of the situation. All the

HOW GOOD IS YOUR PERSONNEL PLANNING?

Here are fourteen questions that will help you analyze your company's set-up and judge how well it is geared to meet today's problems and tomorrow's needs:

1. Have you inventoried your workforce to discover what primary and secondary skills your employees possess?

2. Do you keep tabs on the outside courses that your people are taking on their own initiative to improve their skills or to advance their knowledge? Do you encourage and counsel them in these projects?

3. Have you reviewed your hiring program to make certain that new persons being added to your payroll possess the "capability potential" to do other and more highly skilled jobs than the ones to which they are immediately assigned?

4. Have you analyzed your training program to see if it is helping your employees to develop a greater variety of skills and a greater flexibility in accepting different work assignments? (Job rotation may be useful in starting a program of this kind.)

5. Have you instituted an appraisal program to help you identify the promotion potential of rank-and-file employees?

6. Have you reviewed your job descriptions lately to see if they are up to date and accurate?

7. Do you keep close check on your labor turnover, particularly in skilled job categories?

8. Do you keep employees fully informed of technological changes the company is making and the effect those changes will have on their jobs and their employment security?

9. Do your personnel records provide you with effective instruments for controlling individual and group productivity, costs, wastage, etc.

10. Have you recently conducted a department-by-department study that provides you with an age profile of your workforce, and have you considered the implications of that study on your future employment requirements?

11. Have you made at least a five-year projection of your employment needs and developed a recruitment program to satisfy them?

12. Do you constantly survey your community and your industry to see if your wage rates and fringe benefits are competitive in the labor market?

13. Have you considered the present ratio of supervision to production employees in terms of what that ratio must become as mechanization increases? Are you doing anything about presupervisory training?

14. Are positive, alert, and anticipatory communications used in every phase of your business operation?

If you can answer "yes" to at least twelve of these questions, your personnel planning is probably excellent. If your score is less than twelve, it is time to consider a pretty thorough overhaul of your company's personnel plans and programs.

same, labor is getting considerable collective bargaining leverage out of it.

Antidote to Fear

Alert companies are aware of this and have introduced programs to explain automation to their people. The Goodyear Tire & Rubber Company has developed a comprehensive plan of this kind. The Ford Motor Company has produced a film that emphasizes the many benefits that automation will bring to employees as individuals. If programs like this are carried out in an atmosphere of sincerity and mutual confidence, they can produce positive results as an antidote to fear.

However, in discussing the long-term effect of automation, management should be realistic. It must analyze the extent of its automation potential and plan accordingly. An executive of a large electronics company described what his company was doing to minimize the impact of technology on its employees this way:

> Judging by past experience and the rate of progress we expect to make, we believe we can get perhaps a 25 per cent increase in productivity during the next ten years. In other words, we can do a quarter more work with the same number of people. Of course, we intend to continue to expand. But our expansion will not necessarily mean we will need a greater number of employees. In fact, from an employment point of view, we may not be any larger in 1967 than we are now. However, we will need a more flexible, a better educated, and a more adaptable workforce than we have at present. We are planning how to get one.
>
> One of our problems may be what to do with older employees who resist change and cannot be trained in new assignments. But we expect natural attrition to help take care of this. In the meantime, we are gearing our employment program to the future. We know we will need more technicians and a greater number of technical supervisors. This means we must attract and hire young men and women with these abilities.
>
> We look to the future. When we hire for replacement in unskilled jobs, we search for applicants with promotion potential. In a ten-year period, through sound personnel planning, we expect to alter the nature of our production organization radically. But we think the process will be so gradual our people will hardly know it's going on.

This company has analyzed its workforce today in terms of the demands that will be made on it tomorrow. Even now it is preparing to shape its production organization to meet those demands.

Opportunity for Planning

Your company may be in an entirely different field. You may not have so great an opportunity for improved technology. But the same kind of planning can be done.

How? It is already clear that the factory of the future will depend more on team effort than on the work of individuals. Experts even say that it will be run by crews of specialists. We also know that it takes at least five years to produce an electronics technician from scratch. It may even take one to two years of intense retraining to re-educate a specialist in one field to meet the requirements of another.

Then there is the matter of jobs. Machines may eliminate many unskilled positions in a plant, and thereby increase productivity and lower costs, but trained maintenance specialists will be needed to keep those machines operating. Where will they come from? By upgrading people already on the job? If so, have you begun to plan the training programs you will need to avoid a last-minute, inefficient crash effort?

How sweeping the changes will be that result from automation depends very much on the kind of industry. But regardless of the type of business, it is necessary to plan ahead. You, for instance, may have many specialized problems to consider and solve in your planning. But one thing is certain: You will always

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Suburban shopping centers and highway stores are changing distribution patterns as . . . Devaney Photograph

THOMAS KENNY, *Marketing Editor*

Sunday business is bringing both profits and problems to retailers as pressure increases in some areas for statewide laws to prohibit keeping store on the Sabbath.

S COMPETITION for the retail sales dollar gets tougher, store hours across the nation are lengthening to attract shoppers and increase volume. Week-day evening shopping hours, especially in suburban areas, are becoming the rule rather than the exception, despite the opposition of some small retailers. But far more controversial is another, more recent development—the spread of Sunday openings.

A few years ago, small food stores were almost alone in remaining open on Sunday. But recently the practice has spread to auto dealers, clothing stores, appliance and hardware stores, and, most noticeably, to discount stores, particularly those large units known as highway stores.

New stores, pressured by rising costs and the need to expand volume rapidly, are particularly prone to sell a seven-day week. A survey by the Super Market Institute of the 1,200 supers opened in 1957 shows that 27 per cent do business Sundays. West of the Mississippi, this percentage jumps considerably, to 57 per cent, but in the Eastern half of the nation, it drops to 11 per cent open every day.

Back in 1950 only 5 per cent of all the supermarkets (not just new ones) remained open. The latest complete survey, made three years ago, showed that 16 per cent of all supermarkets were open Sundays. This survey pointed up some marked regional differences in supermarket Sunday selling:

	Open Sundays
New England	1%
Middle Atlantic	1%
East North Central	10%
Southeast	3%
West North Central	12%
West South Central	14%
Mountain & Pacific	78%

California is largely responsible for the high figure of 78 per cent. In that state, many stores never close—they are open around the clock, around the calendar. This developed during the early 1940's, when retailers rushed to serve the thousands of war workers in aircraft plants and other three-shift factories.

Exceptional in the East, Slim's Suburban Store in Scotia, N.Y., is a large retailer that serves the employees of a nearby General Electric plant and closes only on Christmas and New Year's Day.

Geographically, Sunday selling can be roughly divided into three zones. The first is the East and the South. Except for New Jersey and scattered resort areas, laws against Sunday selling in this area are fairly strong and well observed. And merchants generally obey the law without the pressure of police action.

The second zone is the Midwest, where Sunday laws are generally weaker and their observance is not so widespread as in the first zone. Here supermarkets are remaining open in increasing numbers.

The third zone is the Far West, where there is practically no hindrance to Sunday selling. In some communities merchants do voluntarily remain closed, but in most places the supermarkets, discount houses, and various chain stores are wide open on Sunday and doing a heavy volume of business.

The hassle over Sunday openings isn't, as might be assumed, wholly, or even mainly, a conflict of religious and commercial groups, each struggling for possession of the day. It is considerably more complex, reflecting such developments as the clash of downtown and suburban retailers and the severe competition between discount houses and department stores.

It has become such a pressing question that last month the National Retail Merchants Association placed the issue squarely up to its members in the form of a resolution opposing Sunday selling. The resolution was overwhelmingly approved. And on January 21, in Philadelphia, representatives of several retailer associations participated in a panel discussion, sponsored by a nonsectarian group opposed to Sunday selling, the Lord's Day Alliance of the United States.

Adding to the complexities is the fact that the effect of any local decision on Sunday selling, pro or con, is likely to carry beyond a community's lines, for suburban shoppers are a mobile lot. The stringent enforcement of blue laws in one township can be a severe blow to a retailer whose competition may be open just a short drive down the highway.

Consequently, various merchant groups—such as the Suburban Merchants Association of New Jersey—are agitating for the application of Sunday laws on a statewide basis, if at all, to give a fair shake to all.

At the present time, 38 states have laws on their books forbidding Sunday selling. Often relics of a stricter period, these laws usually ban many other activities as well and are largely ignored. Also, the laws may be so weak that they are totally ineffective.

The laws in these 38 states are essentially alike in that they prohibit employment, labor, and engaging in worldly business on Sunday, except for works of necessity. But "works of necessity" seems to cover a wide variety of business, and the definition varies from state to state, ranging from tobacco shops and news-stands to food stores, garages, service stations, and florists.

Four states, in addition to the 38 outlawing Sunday employment, labor, and business, prohibit certain specified kinds of business: Arizona and Montana forbid barbering; Colo-

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Extra Profits—at a Price

WILLIAM O. McGILL

What do the churches think of Sunday selling? Here are the views of a Protestant clergyman who has studied both sides of the issue.

THE MAN on the television screen was saying, "Take the family out for a ride, Dad, and while you're at it, stop in and buy a new car [or a new refrigerator, or a new air conditioner]. . . . King-sized trade-ins. There's just no way of imagining how we can afford to make an offer like this. . . . *Open all day Sunday!*"

Those are the magic words—"open on Sunday." In many areas, "open on Sunday" seems to mean a larger gross income for the merchant, no matter what he sells. When the owner of a supermarket in Arkansas reverted to Monday-through-Saturday business, receipts are reported to have dropped 40 per cent. An automobile dealer in Chicago depends upon Sunday sales for 25 to 50 per cent of the week's business.

On the other hand, banks, department stores, and many automobile dealers as well are promoting legislation to restrict Sunday selling to such "essential services" as filling stations and delicatessens, and religious groups are being asked for their support.

As a boy in Baltimore, I frequently attended Sunday afternoon baseball games with my father and brother. At the time, selling tickets on Sunday for baseball games was illegal in Baltimore. But the club was permitted to sell printed matter, like newspapers and scorecards, just as a drug store might. So the club sold scorecards—at the price of the regular tickets—and nobody was allowed to see the game without a scorecard. It was an evasion. Everybody understood that, and perhaps the knowledge contributed to the thrill of attending the Sunday games.

Some of this spirit of extralegal thrill is present in shopping on Sunday, too. To be sure, the supermarket is open every day of the week and several evenings, and the discount houses are open until ten every night except Saturday. But a suburban housewife is quoted as saying, "We like to go to the shopping center with the family after a late, slow Sunday breakfast. It's fun. It's like going to a fair."

The shopping center people affirm that more people shop on Sunday, and that they spend more, than on any other day. The spirit of the fair takes hold of them. The housewife who shops weekdays may compare brands and prices, and pause to consider whether or not she needs what she sees on the shelves. But on Sunday, she buys with abandon. As long as Father and the children and the station wagon are here, she might as

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The Reverend William O. McGill has been pastor of the Community Presbyterian Church in Wheeling, Illinois, for more than eight years. Formerly director of a Chicago settlement house, Mr. McGill is a frequent contributor to church magazines and writes a weekly column for Paddock Publications.

SUNDAY SELLING SPREADS

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rado auto sales, drycleaning and dyeing, as well as barbering; Oregon, barbering and pawn brokering.

Five other states, California, Iowa, Nevada, North Carolina, and Wyoming, have no statewide laws on Sunday business, employment, or labor.

But enforcement of blue laws has generally resulted in a crazy-quilt of inconsistency across the nation. Much depends on the zeal of local officials to compel obedience to the state law, if there is one, or on the community's decision to tighten local ordinances.

The weakness of the existing laws, however, is in the penalties, which may run as high as $200, but usually range from $1 to $25.

Public Indifference

In the past two years local authorities, church leaders, business men, and some labor leaders have made renewed efforts to enforce the Sunday laws. Before that time, few people seemed to care whether they were observed or not.

This indifference can be traced to the dual nature of the Sunday laws: restrictions against Sunday sports, Sunday recreation, and Sunday liquor on one hand and against Sunday business on the other. For many years public opinion has favored Sunday amusements and sports. As a result, officials were reluctant to bring up Sunday laws. They were afraid people might think they were planning to take away their Sunday pleasures.

When the Sunday laws on sports and amusements were being repealed or ignored, there were few violations of Sunday laws by merchants. The small corner store remained opened in some areas, but the big merchant, the department store, the hardware store, the electrical appliance store, and the men's store were not open on Sunday. Now Sunday business has mushroomed. Small retailers, willing to see Sunday laws ignored in the past, have become alarmed because Sunday business could force them to stay open seven days a week.

In a recent survey of Philadelphia retailers, 95 per cent voted for a closed Sunday. And some merchants who remain open would prefer to close, but they insist that "we must meet competition, and we would gladly close if our competitors would."

As the result of a similar attitude in many areas, the pressure is on for enactment of laws specifically prohibiting Sunday business. Last year the Lord's Day Alliance of the United States was active in Sunday closing campaigns in 39 of the 48 states. Literature and speakers in favor of closing have been requested more than ever before.

More state legislatures are considering laws prohibiting certain types of business on Sunday. In Colorado, Pennsylvania, and New Jersey, laws outlawing the Sunday sale of cars have recently been passed. In Evanston, Ill., the City Council adopted an ordinance that has served as a model for other communities. It is more specific and, hence, has fewer loopholes; it covers more kinds of business and prescribes stiff penalties—up to $200.

Possible Prototype

In states where Sunday selling threatens to become a hot issue, the hassle in New Jersey may well be a preview of things to come, even though there is yet no nationwide pattern.

A local ordinance banning the sale of specific kinds of goods on Sunday, primarily those handled by discount houses, went into effect several weeks ago in Paramus, N.J., but in nearby townships Sunday selling is permitted. The Paramus merchants have applied to the State Supreme Court for an injunction against the local ordinance. The Suburban Merchants Association of New Jersey, which represents several hundred Sunday sellers throughout the state, is asking the Court to test the constitutionality of a law that closes them down while nearby competitors remain open. The 36 retailers affected got from 25 to 40 per cent of their weekly volume on Sunday.

On one side are both chain and independent merchants and discount

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EXTRA PROFITS—AT A PRICE

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well pick up a few extras. There are extra hands to carry the bags and plenty of room for stowing them into the wagon. So the merchants say, "If the lady wants to shop on Sunday, let's give her what she wants—especially if it's profitable."

But is the merchant bound to give the lady everything she wants? Has he no obligation to the community at large, or to his employees, or to himself and his family? Has he no obligation that is higher or more demanding than duty to customers?

Suppose some families do like to go shopping on Sunday—the *salesman* may not be so happy about spending his Sunday behind the counter. The customers may be having a great time—but *his* feet hurt, and *his* children are at home without their father.

In recognition of this fact, Cardinal Spellman has called upon New York Catholics to keep in mind the ancient command: "Remember the Sabbath day, to keep it holy." Reminding them that this command also means that others should not be encouraged to break the Sabbath, he asked Roman Catholics to refrain from Sunday buying.

In a suburban hardware store, the young owner says, "My wife and I have always gone to church on Sunday. We've tried to bring up our children the same way. Now we have this business—mortgaged, of course—and there just isn't any other way to make it than by being open when people want things."

Says an auto dealer: "What can you do? This is a competitive business. When everybody else is selling, you're dead if your doors are closed."

Suburban homeowners do many of their household chores on Sundays—lawns are put in, tended, watered, cut, weeded. There are faucets to be adjusted, garages to be painted. Apparently few plan the weekend's work carefully enough to have the proper supplies on hand. Sunday finds them going to the hardware store to get what they need.

More Talk than Practice

If customers would plan their buying, if they would honor a man's wish to spend Sunday with his family, the merchant might be happy not to mind the store on Sunday.

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FINANCIAL MANAGEMENT FOR AN ELECTRONIC AGE

WILSON T. SENEY

Far from being shelved in favor of computers, management's "figure men" may, if they rise to the challenge, be more influential in future than ever before. Here's a profile of tomorrow's "nonelectronic controller."

WHAT WILL BECOME of management's "figure men" in an electronic age? Of the answers to this question that are current in executive circles, two call for special comment. With man's eternal facility for learning the words without the music, many management men seem to have concluded either that (1) technical proficiency in utilizing computers will be the sole secret of success for tomorrow's financial executive or that (2) all you have to know is how to get along with people.

The corrective to both ideas is to recall the really fundamental contributions that have been made by the "figure men" whose specialized skills are being made obsolete by electronic data processing, linear programing, and related techniques. There are many such men in the managerial ranks of American business: economists, controllers, public accountants, industrial accountants, statisticians, and financial executives generally. To each of them, the advent of the electronic brain poses a real science-fiction question, "What can you do that a machine can't do better?"

Is the answer so negative that managers and executives who deal in figures must resign themselves to loss of status? Will the man who forecasts return on investment find himself regarded as a poor, and rather expensive, substitute for an electronic think-machine? Will the man who measures the profit impacts of changes in sales and production plans find himself replaced by a memory drum?

Actually, developments in the electronic handling of symbols and figures have opened new vistas for the financial executive. Machines are taking over the drudgery of analysis and problem solving. Financial and accounting executives now have the opportunity to concentrate on tasks that can be performed only by men and not by machines. If they pursue their opportunities intelligently, perhaps credit will go to electronics for improving management practice as well as data-processing techniques.

Management (and specifically the practice of financial and accounting management) is a function of men—not of machines. In the past, the important contributions of executives have been nonmechanical and nonelectronic. In the future, financial and accounting executives will continue to be valuable to American business for the same basic reason as in the past: managerial ability.

The financial executive who demonstrates this thesis might be called the nonelectronic controller. As described here, he represents a composite of fifteen successful men, each of whom either is or has been a controller. At present, two are chairmen of the board, two are presidents, one is an executive vice president, and several hold various vice-presidential titles, such as vice president for finance, administrative vice president, and vice president and controller. One man has the plain title of controller (but he doesn't feel badly about it). Their companies range from medium-size to giant, and each company is widely and favorably known.

The men have lived long enough to establish highly individual histories. Three are over sixty, nine are in their fifties, and three are in their forties. Three have no college degree, one has a Ph.D. Five are certified public accountants; five others have advanced academic or professional degrees in various fields. Four have done quite a bit of teaching. Nine rose almost entirely through the accounting field, three came to their companies from financial institutions, and the remaining three originally achieved management stature in the sales or manufacturing end of the business. Three have been employed by one company all, or almost all, their business lives; six have had several employers.

In spite of their differences in background and experience, each of these men has demonstrated his ability to contribute to the successful

management of his company. These contributions have, in each case, been recognized by promotion to the top-management level.

Perhaps the fifteen men who make up this composite nonelectronic controller would not describe their approaches and practices as they are described here. But in the opinion of those who know them, their achievements resulted largely from a firm grasp of five elements:

1. An understanding of what the real job of a top manager is.

2. Knowing how to work as a member of the management team by making positive contributions to the solution of management problems.

3. Good judgment in providing the information needed by management.

4. Organizing their end of the business to discharge controllership responsibilities.

5. Skilful handling of both their own working relationships and those of their subordinates.

Top Management's Job

The nonelectronic controller displays his understanding by realizing that top managers are the most important market for his services. He has the good sense to keep in mind what they do and what their needs for information are.

He knows that top managers try to administer company affairs to maintain optimum profit and competitive positions. To do this, they actively pursue a variety of paths. But the perceptive eye observes necessarily recurring patterns of executive behavior. That is, the manager analyzes the technological and economic environment in which his company competes. On the basis of his analysis, he attempts to forecast what is going to happen. Then, he plans how to conduct the affairs of the company with his forecast in mind. When a plan is agreed upon, he organizes and staffs to carry it out. He looks to line supervision to coordinate and control action in accordance with instructions. On a more or less continuous follow-up, he re-evaluates what is happening in the light of what he thinks is going to happen.

From his understanding of the management process, the nonelectronic controller draws five conclusions:

1. Top managers make decisions at every step of the administrative process. They must make decisions, or the step will not be taken. In fact, decision making has been called the one distinguishing characteristic of top executives.

2. Top managers are much more interested in the future than in the past. Their decisions are concerned with what to do starting now and are based on their best judgment of the future results of present actions.

3. Top managers get results, first, by translating decisions into instructions for action. No matter how permissive or authoritarian the manager may be, he depends in one way or another on statements of objectives, policies, budgets, authorizations, and the like to indicate the way the organization should go.

4. Top managers are interested in measuring how well performance is proceeding according to plan. If operations do not proceed according to plan, they want an opportunity either to revise plans or to bring performance into line with plans.

5. Top managers are interested in how people plan and perform. Participation in planning, commitments on plans, accomplishment of plans, explanations of variances, and notice that plans should be changed or reassurance that plans need not be changed, all these must originate with people.

THE AUTHOR • A specialist in long-range planning and financial and operational controls, Wilson T. Seney has had wide experience in industrial and retail accounting. Now a senior consultant with McKinsey & Company, New York, Mr. Seney began his business career with Container Corp. of America, moving on to Marshall Field & Company and Hall Brothers, Inc., and later becoming controller of Univis Lens Company. He is a member of the Controllers Institute of America and author of many articles on management planning and controls.

Making the Management Team

The nonelectronic controller not only understands the real job of top managers, but also knows how to operate as a member of top management in planning and control activities. To gain acceptance on the top-management team, he is helpful in positive instead of in negative ways. The difference between the two may be demonstrated in the field of forecasting and budgeting.

The negative-minded financial executive complains that he does not know what figures to give the boss because the boss cannot make up his mind what assumptions to use. This executive is wrong on two counts. In the first place, he is not consistent. He says that profit is the best yardstick, but then he asks the boss to establish price and volume goals before anyone knows what the profit results of these goals will be. In the second place, he is overlooking a chance to operate as a member of the team. Establishing the assumptions on which a budget is built is one of the important functions of top management, and he should welcome the chance to participate.

Seizing an Opportunity

In contrast, the nonelectronic controller will welcome such a chance. For example, a controller in the television industry prepares a profit forecast based on an assumed product mix at assumed prices—more likely, he prepares more than one forecast, based on more than one set of assumptions. If he can obtain estimates from the field of the number of sets to be sold through each of perhaps 100 distributors, so much the better. These forecasts may distinguish between sales of color and black-and-white sets, between console and table models, and between mahogany and blond cabinets.

Every figure is based on defined assumptions. For instance, it may be assumed that blond cabinets are becoming more popular because of a trend toward modern furniture. It may be assumed that more table models and fewer consoles will be sold—perhaps because people want to spend as little as possible on black-and-white before the advent of color television, or perhaps because more people are buying a second and less expensive set. These assumptions may foretell the future or they may not. If more than one forecast is submitted, some of the assumptions must be wrong. But the important points are that (1) recognized assumptions underlie the figures, (2) the figures are logically developed from the assumptions, and (3) the managers receiving the figures understand the assumptions and the effects of the assumptions on the forecast cost-and-profit figures.

The managers thus have something with which to work. If they are satisfied that the optimum return on investment indicated by one of the forecasts is supported by sound assumptions, they can approve the forecast as the basis for spelling out budgets. On the other hand, they may question the assumptions or suggest some other course of action. This means further discussion and reworking of the figures. And the nonelectronic controller has participated in preparing and evaluating the top operating plan.

One more example—this time in the field of tax planning—may point up the degrees of creativity that the nonelectronic controller may display. It is a minimum contribution to calculate tax liabilities on any given profit forecast. It may be a considerable contribution to prepare figures showing how much tax saving would result if the company set up a subsidiary in the form of a Western Hemisphere Trade Corporation to handle its export business. It may be an even greater contribution to suggest the establishment of the trade corporation if the company is not yet in the export business.

Surely these are more effective ways of participating in management decisions than the negative approach of saying, "I don't know what figures to give the boss because the boss can't make up his mind what he wants to do." The negative-minded controller who says this leaves the impression that he looks upon his job as just grinding out figures in answer to problems defined in their entirety by other executives. He also leaves the impression that he is replaceable by a machine, which can do the same job better and faster.

The nonelectronic controller knows that he can be helpful in ways that the machine cannot. He can give and take with his fellow-executives, and he can imaginatively anticipate questions and answers. This ability not only enables him to participate actively in managing the business, but also enhances his knowledge of what kinds of information he should provide for his fellow-managers.

Information, Please

But such a performance requires something more than providing information in textbook terms. Practically everyone knows that managers need information for making decisions, for communicating decisions to the organization, and for holding themselves and their managers accountable for results. But not everyone knows what kinds of information are needed for which decisions, or which executives require what information, or how to reconcile conflicting needs for information, or how to hold the costs of accounting and statistical services within reasonable limits.

The broad-gage financial executive tailors his accounting and reporting practices to the business he is serving. For example, in a basic chemical company he does things very differently from the way he would in a company that manufactures women's dresses. He accounts for capital assets and their maintenance in one way in the chemical company and in another in the dress

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MERIT-RATE YOUR CONTROLLER

Here are two sets of questions to help you judge how well he measures up to growing opportunities. If you can answer "yes" to most of the questions on the left, you probably have a top-notch financial executive who is working with top management in a genuinely productive way.

Does he . . .	**Or does he . . .**
understand that company executives need his help in making decisions?	believe that his job is done when he issues the usual financial statements as a check on the decisions and accomplishments of operating executives?
help to define the kinds of decisions required before providing applicable figures?	expect to confine his efforts to "putting the dollar sign" on plans, after all basic decisions have been made by other men?
tailor accounting practices to the specific requirements of the operations being reported and controlled?	insist on applying the same chart of accounts and the same accounting procedures to a variety of situations?
provide needed information at reasonable cost?	fail to provide needed information through false economy?
provide needed information in clear and useful form?	conceal needed information within voluminous and confusing reports?
help managers to delegate authority and hold people accountable for results?	fail to provide "responsibility accounting" as a service to management?
respond promptly and effectively to requests for special studies and information of current interest to management?	keep his organization so bogged down with routine work that he is unable to provide special information when needed?

United Press Photo

GETTING RESULTS IN 1958 LABOR NEGOTIATIONS

EDWARD C. SCHLEH

Your employees don't want to cripple a healthy business for the sake of short-term gains. Deal them in on your problems and you'll find even the toughest union easier to handle.

IF YOUR COMPANY'S workforce is organized, in whole or in part, management is faced with the problem of getting along with a union or unions. It can be a king-size headache, but it can be a challenge and an opportunity too—and smart management approaches the job in a positive way. An attitude of "How can we work with the union to get the best possible operating results?" is the first step toward the kind of labor relations that pay off in smooth and profitable operations.

To some extent the objective of a union, at least short-range, is to get more pay, benefits, and recognition for employees without concern for good management operations. That's why a good operation and at least some of the demands of the union are often in opposition. How can they be reconciled, as a practical matter?

Don't make the mistake of forgetting that the employees represented by the union are *your* employees. These men must produce your goods; you must depend on them to get sound operation. In the pressure of negotiation it is easy to look at the procedure entirely as a fight or at least as a jockeying back and forth between management and the union. Unfortunately, management almost always loses in this jockeying.

A good basic rule for all negotiations is this: "Negotiate with the union, but *win your employees.*" After all, your real objective is to get your men to produce most effectively for the money you are paying them.

Lead up to negotiation by the way you work with your employees throughout the year, the way you give them information. In this way you can avoid many problems that would otherwise become critical at negotiation time.

Remember, the union doesn't turn out work. The men do, and they are with you the year around. *They* are important to you, not the union as such. The basic objective of an agreement of any kind is not to get the lawyers to agree, but to get the principals to agree—to achieve a satisfactory relationship.

In order to win your employees, you have to give them information. You wouldn't want to leave this to chance or to a union leader. Ordinarily men are reasonable *if* they have (and believe) all the information. After all, they are immediately concerned with your problems.

For example, it is often helpful to keep minutes of every negotiation meeting and get a copy to every employee the day after the meeting. In some cases it may be impractical, but in many smaller plants this is an excellent way to make sure that your employees understand the whole situation. If you follow a practice

STEER YOUR UNION TO RESULTS

Here are some ways to help you achieve an effective working relationship with your employees and your union:

- Win your employees and keep them on your side by keeping them informed. Let them know the principles for which you stand. Sell them these principles.
- Approach negotiations as a joint effort to work out problems between you and your employees (not between various second parties). Give your negotiator authority to make decisions.
- Don't stand too rigidly on "management prerogatives." Ask yourself what prerogatives you really need to reach your business goals. These are the things you should fight for.
- Recognize the union's leaders. Don't always battle them—work with them when you can. Try to make them accountable to the membership for whatever stand they take.
- Make your contract provisions definite. You should not have to renegotiate items already in your contract during the year.

of carefully reporting to them as negotiations progress, you will find that they are inclined to believe what you tell them at the time of a crisis. What's more, union leaders who wish to be fair find that these minutes are actually helpful to them in getting the whole group to vote for a sound proposal.

Employees want you to have a profit. A small, closely held corporation was negotiating with a union. The union got wind of the fact that the company had made $200,000 profit the year before and said, "You can easily give this extra wage increase. It will only cost you $30,000 a year." The company said, "Yes, we made the $200,000, and we want to make more. We don't think it's enough, and we don't believe this is a basis for negotiations." All of this was put into minutes and every employee got a copy. When the minutes hit the production floor, the whole issue was dead. The reaction of the average employee was, "Well, that's natural. Of course the company wants to make a good profit." This item didn't come up in negotiations again. It was dead.

Sell Your Principles

Too often in negotiation the company starts out by simply saying "no." After saying it long enough, they gradually say "yes" to some things, and as negotiations progress they give in to more and more demands. But the company doesn't seem to take a stand *for* anything. It lacks basic principles by which to negotiate. As a result, the employees believe the only approach for the union is simply to demand more and more—that if the union negotiators put on enough pressure, they will finally push the settlement just about to the breaking point and get the best deal.

A better kind of negotiation, and one that, in the long run, employees respect, comes about when the company has sound principles, stands by them, and sells them.

You can sell principles if they're sound. A steel products concern was about to put in a pension plan. After careful analysis, management came to the conclusion that the best overall plan, considering the ups and downs in the business and the risks involved, was a profit-sharing trust. Management knew that both the international union with which it dealt and the individual locals were dead set against any such plan. The company, however, put a man on this job full time. He went from plant to plant explaining and selling the principle of the profit-sharing trust. After about three years the profit-sharing trust was in every one of this company's contracts.

An automotive parts company had carefully defined its principles of operation. The union with whom it was negotiating demanded that the company give in on quite a number of them. The company felt the issues were so basic that it would simply have to take a strike on them. The next management meeting revolved around preparation for a strike, instead of ways to meet the union demands. The decisions were put into operation. It became apparent to the employees that the company was going to stand on these principles. Within a week the whole negotiation was settled.

Mature bargaining is a process of working out problems objectively. Emotional jockeying back and forth is not a sound basis for negotiation.

Beware the King's Advocate

Feeling that they haven't had enough experience in negotiations to compete with skilled union business agents, many smaller concerns employ an outside negotiator.

This is very often a mistake. It suggests to employees that they need an outside union specialist to represent them. In effect, it simply drives another wedge between management and workers. Also, these negotiators rarely get the real "feel" of plant operations. Their goal is to get a contract, not to lay a foundation for sound operation in the future.

A small manufacturer of specialty items hired an outside negotiator for his first contract. About one-third of this company's sales profit came from a direct sales outlet near the plant, staffed with eight or ten employees. The union demanded that these employees in that sales office be included in the bargaining unit for the plant. The negotiator, to whom this seemed an unimportant demand, quickly agreed. Immediately troubles began. Since the sales office stayed open Saturday and Sunday to make the most of the highway trade, this caused disputes on pay for Saturday and Sunday work as such. And since the sales group was in the major bargaining unit, the company was constantly faced with the problem of having to promote people from the plant to these sales jobs. Very often the people didn't fit the job. But *they* didn't think so. It was difficult to put in sales incentives, because incentives that would work in a sales office wouldn't work at all in the plant. Point after point in the contract that applied very well to the plant operations just didn't fit the sales office.

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Bendix

Future executives are introduced to a computer's decision-making powers and uses

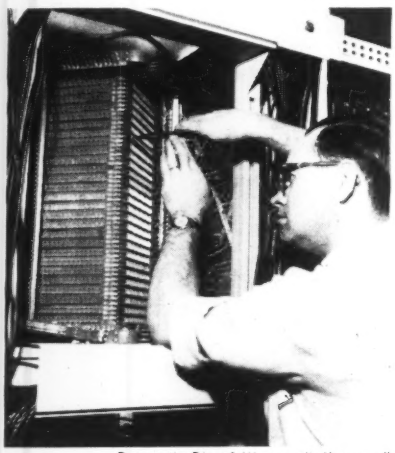
PUSHBUTTON DECISIONS: *HOW FAR AHEAD?*

KENNETH HENRY, *Executive Methods Editor*

The computers are coming—better, brainier, and more business-minded than ever. Are we, as some have predicted, on the threshold of a brave new world of decision by machine?

ELECTRONIC COMPUTERS, management's new problem-solving wonder boy of less than a decade ago, have recently become something of a whipping boy. When the first digital computers designed for business applications made their debut back in 1948, many ordinarily cool-headed business men found it hard to resist the publicity, the pitch, and the promise. Exaggerated claims led some of the first users of computers to expect them to perform jobs they were never intended to do, or that men—or punched cards—might do better. Though nobody expected to see circuitry and vacuum tubes take over control of production, record-keeping, and decision making overnight, some business men unquestionably expected a good deal more than has been or could be delivered.

In the words of one expert, "The extensive fanfare of oversimplified and erroneous pronouncements and commentaries" handicapped a clear view of computers from the very start. Expectations of the savings in cost, time, and labor were—and still are—often unrealistic. As a result, disappointment and cynicism set in in some quarters. This is an understandable reaction for companies that expected too much and gained too little. But it would be just as serious a mistake to discount the future potential of electronics in business. Actually, the most practical applications of the computer in executive decision making and control probably still lie ahead—as business men become more realistic about what the "hardware" can and can't do, and as new technical refinements appear.



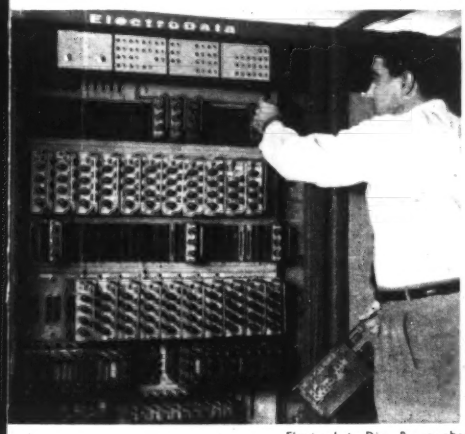
Datamatic, Div. of Minneapolis-Honeywell

Memory unit of a $2.5 million computer

There is still a surprising amount of misunderstanding about what existing equipment will do, and consequent confusion about where (and whether) a computer might fit into a company's operations and decisions. Digital computers can classify, sort, compute, summarize, record, and communicate. "But processing is not an end in itself," says P. W. Pinkerton, partner of Haskins & Sells. "The test of justification is present or future need for the data." While this is well recognized by most managements, it is a commonplace among consultants in the field that too many companies take the plunge

before making up their minds on what data they need and why. But once management has defined its problems and objectives, the equipment's infallible memory, foolproof calculation, and quick answers may be of great value.

While computers will probably play a growing role in the future in



Electrodata Div., Burroughs

Computer maintenance isn't for amateurs

actual management decision making, the equipment now in operation is almost invariably assigned to "bread and butter" jobs. The commonest and best-known of these applications is payroll—which, according to more than one specialist, "is quite possibly the best example of what *not* to do with a digital computer." It is evident, though, why payroll operations are a common starting point for computer application. Payroll systems are routine, well defined, and usually mechanized, hence easy to convert; and this permits management to put the computer to work immediately, with some payoff right away. Many experts, however, question the typical method of mechanizing company data one step at a time. In many cases, such as payroll and sales analysis, men or punched cards may be able to do the same job as well or better—and often more cheaply. And while some of the computer cost is, of course, immediately absorbed, solution of the real problems may be bypassed or delayed.

As many companies have been finding out the hard way, a long period of analyzing over-all operations, policies, and procedures is essential before the decision to convert to electronic data processing can wisely be made. In the words of John Diebold, of John Diebold & Associates, the big first step is "to design the best possible information and communication system for meeting the needs of the organization, whether it relies upon a computer, a simple manual and machine system, or entirely upon humans." What this means, basically, is that management must know clearly what it is now doing, how it is doing it, and why it is doing it—as well as where it wants to go. Ideally, say many experts, the first job is to study the company's present systems and procedures from top to bottom, streamline them if necessary, then decide where and for what purpose a computer should be used—if at all. And this is a complicated and costly job. It may take as long as two years, running against considerable internal resistance along the way.

Many of the more useful present applications are in the area of operations research—and it is here that the computer manufacturers and consultants foresee major benefits in the years to come. Operations research, or "opsearch," as some initiates have begun to call it, is a term that embraces a variety of mathematical techniques involving the application of scientific method to management problems. Linear programing, one of its major techniques, is essentially a form of controlled, symbolic trial and error, which substitutes a comparatively inexpensive mathematical exercise for very costly experience.

While business men often feel exasperated with the jargon of computer men, the technology it describes is more and more being put to practical uses that management does understand. For example, Charles G. Abbott, Manager - Administrative Services Division of Arthur Andersen & Company, reports a dramatically successful use by a farm implements manufacturer with 36 major product lines produced in six different plants. When a computer was used to determine the allocation of product production to these six plants, it came up with the information that one location could not produce competitively. As a result, that plant was closed entirely—at a saving of about $1 million a year.

Electronic Inventory Control

B. F. Goodrich-Hood Rubber Companies, Watertown, Mass., are using data-processing equipment to obtain instantaneous reports on inventory against committed orders to facilitate production planning decisions. Company capacity is 100,000 items of footwear daily. Without the electronic equipment, as many as 200,000 pairs of shoes could reach the warehouse before showing up on records five days later. Speaking of the new system, Goodrich-Hood's president Raymond H. Blanchard says, "It is now possible to balance inventory against committed orders and reduce the variables in manufacturing to the styles, sizes, and colors necessary for immediate commitments." It hardly needs to be added that human experience in evaluating

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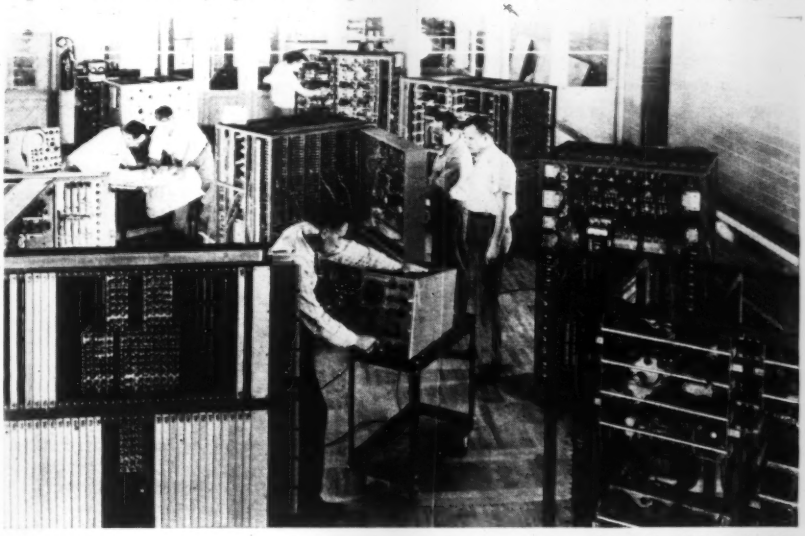


International Business Machines

On the assembly line: getting the "brains" ready for business

THE RARE EARTHS:

Family of Metals Seeks Profitable New Relations

MELVIN MANDELL, *Industrial Editor*

LONG NEGLECTED because their individual and unusual properties were not known, the rare earths, a "chemical brotherhood" of fifteen not-so-rare metals, seem to be moving into the industrial spotlight. A previous boomlet fizzled out about three years ago, but if a dozen or so projects now scattered throughout the U.S. industrial world come to fruition, the rare earths will make further contributions to the improvement of steel and other major metals, boost refinery efficiency, and step up the action of pharmaceuticals. More glamourous projects are also in the offing for the rare earths: in rocket fuels, air-borne nuclear reactors, and electronic amplifiers.

Practically everyone who smokes has used the rare earths without realizing it: flints in cigarette lighters are made of a mixture of these elements called misch metal. But as technology leads more and more industries to put the rare earths to work, their collective name should become as familiar to the layman as uranium is today. However, the names of the fifteen individual rare earth elements are hardly likely to become household words. Many of them are pretty formidable tongue-twisters – "praseodymium," "ytterbium," and "dysprosium," among others.

Separation Techniques

The future of the rare earths in industry is closely tied to better and cheaper ways of separating them. Until World War II, the main method was fractional distillation, which took advantage of slight differences in their chemical properties. Sometimes as many as 40,000 separate distillations were necessary.

Ion-exchange, the method used to soften Los Angeles's water, is now being applied with great success. In ion-exchange, the mixture of the rare earth compounds, dissolved in acid, is dumped into the top of a tall column filled with synthetic resins. Each rare earth compound in the column descends at a slightly different rate, so each one arrives in turn at the bottom of the column.

Unfortunately, the process is expensive and cannot supply enough pure materials at a reasonable price for a large market. Other chemical techniques, competitive with ion-exchange, are also used, but the industry is still waiting for a cheap, simple separation system.

In addition to the separation studies under way at the Atomic Energy Commission's Ames Laboratory in Iowa, the Bureau of Mines spends $200,000 annually on separation of

PRICES OF RARE EARTHS TODAY AND FIVE YEARS AGO

	1953	1958
Misch metal	$4.50 per pound	$3.15 per pound
Cerium metal *(pure)*	$30 per pound	$24 per pound
Terbium oxide	$500 per gram	$3 per gram
Europium oxide	$50 per gram	$15 per gram

the rare earths at its Rare and Precious Metals Experiment Station, Reno, Nev.

Uses of the Rare Earths

Soft and subject to rapid corrosion by air, the rare earth elements cannot be used as structural metals in big slabs, although one electrical manufacturer is studying metallic cerium, lanthanum, and yttrium. Even in compound forms, they are hardly destined for the tank-car sales characteristic of industrial chemicals. The rare earths are mainly used a pinch at a time to react with or catalyze larger quantities of some other material.

One reason the rare earths have not been so important in the past is that some of their properties had no commercial value until the past decade. For example:

- Gadolinium has the highest neutron cross-section (opacity to neutrons) of any element. Europium and samarium also have this property to a lesser degree. The control rods that are inserted in a nuclear pile to limit the reaction rate must have a high neutron opacity.
- But for the addition of cerium, the thick, leaded-glass windows through which experiments are observed in nuclear labs would turn brown from gamma radiation.
- Yttrium has possibilities as a structural material in nuclear reactors for aircraft, missiles, or space stations.
- Several of the rare earth metals and their compounds become magnetic or superconductive at temperatures near absolute zero. For half a century, unusual characteristics at extremely low temperatures have been of strong interest to scientists, who see them as one key to the secrets of nature. Now that man is preparing to explore the regions of space where ambient temperatures are near absolute zero, and an electronic component called the cryotron, which works only at these temperatures, has been developed, these

LANTHANUM • CERIUM • PRASEODYMIUM • NEODYMIUM • PROMETHIUM • SAMARIUM • EUROPIUM • GADOLINIUM • TERBIUM • DYSPROSIUM HOLMIUM • ERBIUM • THULIUM • YTTERBIUM • LUTETIUM

What are the rare earths?

Actually metals, the rare earths constitute a group of fifteen chemically similar elements. Two closely related elements, scandium and yttrium, are usually classified with them (and are marketed by many companies that also sell the basic rare earths).

Although the scarcest rare earths are more abundant in the earth's crust than silver, they have kept the name given them by medieval chemists who, finding them mixed together in one ore, couldn't separate or reduce them to metallic form. It wasn't until 1794 that Gadolin, a Finn, separated yttrium. Most of the rare earths were discovered during the nineteenth century, although promethium, an unstable element, wasn't actually produced until 1950 (in an American atomic reactor).

The reason the rare earths behave so much alike chemically and are so difficult to separate is that their valences, or chemical gripping factors, are all the same. You have to go deep inside their atoms to find the physical differences in their electron rings that make them distinct elements.

Since the rare earths are so difficult to separate, it's not surprising that they were first used as mixtures of compounds. Reduced to metallic form, but still unseparated, the rare earths were called misch metal. This is still used to improve the resistance of stainless steel to sulfuric acid. But as metallurgists learn more about which rare earth is effective, the use of misch metal for this application will decline.

Because the most common ore of the rare earths, monazite, also contains up to 10 per cent thorium, the rare earths business has always been closely tied to sales of thorium. When mantles of gas lamps depended on a thorium oxide and cerium oxide combination, the rare earths were the by-product. As electric lighting took over, and use of the rare earths picked up in the glass and ceramic industries, thorium became the by-product. The atom bomb again reversed the situation. Thorium is now being actively studied as a nuclear fuel, although uranium is still the best bet for this application.

The development of the atom bomb stimulated great interest in the rare earths in still another way. Whenever an atom bomb is exploded, rare earths are synthesized in substantial quantity. They are no particular problem to anybody in that situation, but when the atomic reaction is controlled in a reactor, the rare earths become a nuisance (they slow down the reaction). This has activated a lot of research by the Atomic Energy Commission into how to separate them from other materials as well as from each other. In addition, up until 1955, the AEC stimulated the rare earths industry by buying and stockpiling thorium. Without the substantial support of the AEC plus help from the Bureau of Mines and the Office of Naval Research, we wouldn't know so much today about the rare earths and how to use them.

No significant applications have yet been found for terbium, holmium, ytterbium, and lutetium. Promethium is useless.

properties have suddenly acquired new value. Still a laboratory curiosity, the pin-sized cryotron only works inside a special super-refrigerator, but its development presages a new branch of frigid electronics.

• Strong and growing activity in another area, microwave (extremely high frequency) transmission, should also stimulate interest. Gadolinium and lanthanum are being investigated for use in an experimental microwave amplifier called the maser, a descendant of the transistor. Complex compounds, including some of the rare earth elements, are formed into transparent garnetlike crystals, which have various functions in microwave circuits, including valve action. They are transparent to the microwave energy in one desired direction, and opaque in the opposite direction. Most of the applications for microwave equipment are in radar and missile guidance, but it is also used in telephone communication. Microwaves travel in straight lines without diffusion. They can be accurately aimed from one point to another to make up the microwave relay systems that now crisscross the nation.

• Rare earth compounds are being studied by a major chemical combine as a possible substitute or companion for lithium chemicals in rocket fuels.

• Rare earth compounds make certain phosphors used in TV picture tubes sensitive in the infrared region (DR&MI, October 1957, page 56).

The Rare Earths Help Steel

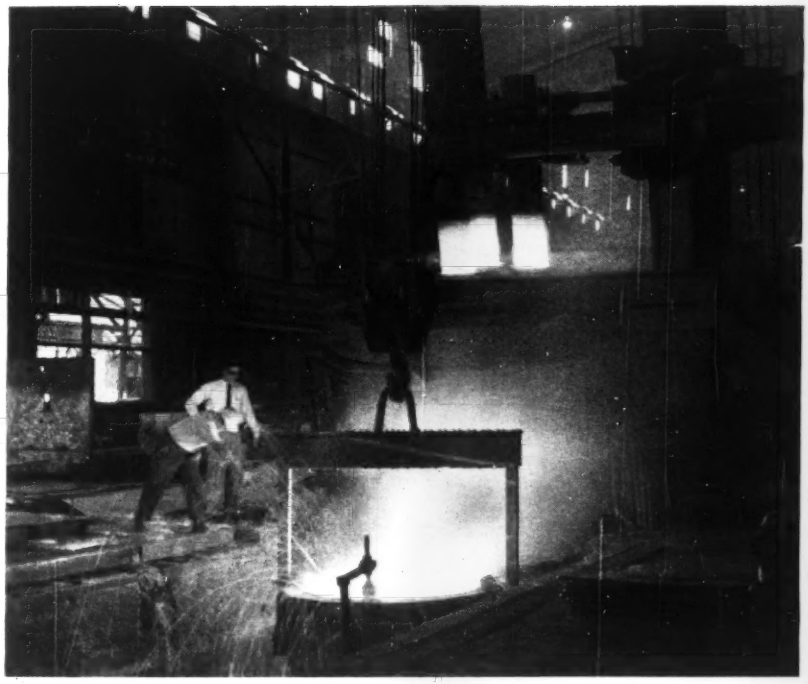
The iron and steel industry is already one of the largest users of the rare earths and is potentially a much greater one. Because of the need for proving any change in iron and steel technology in the mill (you can't make steel in test-tube quantities), use of the rare earths has been held back. But some test runs now under way in various mills could greatly increase their value in steelmaking.

At present the rare earths are used in the mixed forms, either as misch metal or as compounds, to improve the hot workability of some steels and to remove impurities. Although it is possible that only one or several of the rare earths in the mixtures (which are about 50 per cent cerium or its compounds) are efficacious, little work is being done at present on the effects of adding just one rare

HOW THE RARE EARTHS ARE USED IN INDUSTRY

NOTE: Where the term "rare earths" appears below, it means a mixture of all the rare earth elements. Didymium, a mixture of prasecodymium and neodymium, was originally thought to be a single element in the rare earth series. This table was prepared with the aid of Lindsay Chemical Company.

METALWORKING	
Magnesium, aluminum, zirconium-thorium alloys	*rare earths*
Scavenger in ferrous and nonferrous alloys	*misch metal*
Additive for stainless steel manufacture	*rare earths*
Nodular cast iron	*rare earths*
Alloys for aluminum solders	*rare earths*
Deoxidation agent for scrap titanium	*gadolinium*
ELECTRONICS	
Vacuum tube getters	*rare earths, cerium*
Ceramic capacitors	*cerium*
Thermionic cathodes	*cerium*
Television tube glass ingredient	*cerium*
Phosphor activators	*samarium, cerium, gadolinium, europium, dysprosium, lanthanum*
Maser microwave amplifier	*gadolinium*
Ferrimagnetic garnets for microwave use	*erbium, yttrium, gadolinium*
COATINGS	
Flame-sprayed oxide coatings	*rare earths*
High-temperature vitreous enamels	*rare earths, cerium*
Chromium-plating bath additive	*rare earths*
Additive for hot-dip bath for aluminum	*rare earths*
GLASS	
Polish for various glasses	*rare earths, cerium*
Colored glass	*didymium, prasecodymium, neodymium*
Welders' and glassblowers' goggles	*didymium*
Ultraviolet absorbing glass	*didymium, rare earths, cerium*
Light filters	*didymium, prasecodymium, neodymium*
Blocking polish for mirror furniture	*cerium*
Photosensitive glass	*cerium*
Hard glasses for instrument bearings	*cerium*
Glass coloring (CeO_2 with TiO_2)	*cerium*
Glass decolorizing	*cerium, neodymium, didymium, rare earths*
Fluorescent glass, thermoluminescent glass	*cerium*
Easily solarizable glass	*cerium*
Radiation coloring inhibitor in glass	*cerium*
Tracer in glass flow in glass factories	*cerium*
Glass solarization inhibitor	*cerium*
Optical glass	*yttrium, lanthanum*
CHEMICAL	
Increase corrosion resistance in filter cloth	*rare earths*
Catalysts	*rare earths, didymium, cerium, neodymium*
Oxidizing agent	*cerium*
Reagent chemical	*lanthanum*
TEXTILE	
Textile waterproofing, textile dyeing	*rare earths*
Silk loading	*rare earths*
PAINT	
Paint and ink driers	*rare earths, cerium, didymium, lanthanum*
Vitreous enamel opacifier	*cerium*
ELECTRICAL	
Additive for primary cell anodes	*rare earths*
Nernst glowers	*cerium, yttrium*
Ingredient in sintered oxide magnetic cores	*cerium*
Electrical resistance alloy addition	*cerium*
Rectifiers	*cerium*
Core ingredient in arc lighting carbons	*rare earths*
CERAMIC	
Manufacture of tile clay bodies	*rare earths*
Additive to salt glazes for alumina ware	*didymium*
Ceramic dielectrics	*didymium*
Refractories	*rare earths, cerium*
NUCLEAR	
Additive to concrete radiation shields	*rare earths*
Neutron control for atomic reactors	*samarium, europium, gadolinium*
Scintillation crystal activator	*europium*
Neutron flux integrator in atomic reactors	*dysprosium*
Burnable poison in atomic reactors	*dysprosium*



A small amount of rare earths was put into the ladle before this heat of molten steel was poured. Carpenter Steel Company, Reading, Pa., has used the rare earths for fifteen years.

earth at a time. The Electro-Metallurgical Division of Union Carbide, however, does supply two grades of cerium-bearing magnesium-ferrosilicon for use in making ductile iron. The present high costs of separation make use of the rare earths mixtures (which run as low as a dollar a pound) mandatory.

Once the rare earths are available separately at something close to the price of the mixed forms, and once the best method of adding them to a melt is determined, their use in this primary industry could mushroom.

Uses with Other Metals

The rare earths also play a role in other metals. An English company has developed a group of magnesium-rare-earths casting alloys with improved high temperature characteristics. They are mainly used in aircraft engines. The copper industry has studied the rare earths as a means of desulfurizing copper and as a copper-alloying element. The rare earths also play a role in some aluminum and zirconium-thorium alloys.

Some minor uses of the rare earths as catalysts point to a potentially great advance. A few of the rare earths, mainly cerium, have already proved themselves by accelerating the drying of paint films and as polymerizers of plastics. But these applications would be minor-league compared to oil refinery catalysis. Hundreds of tons of materials—platinum and other precious stuff—are used annually to increase the yield of high-octane gas from crude. A number of the larger oil companies are actively studying the uses of various rare earths for this purpose. A completed research project indicates that the rare earths can be used to remove sulfur from crude, and this application is being studied by one major oil producer.

Smog Relief?

Another experiment, which may some day help relieve air pollution and smog caused by auto exhausts, strengthens the case for the rare earths as refinery catalysts. At the Armour Research Foundation in Chicago, the piston heads of a Chevrolet motor were flame-sprayed with a ceramic coating containing 80 per cent rare earths oxides, mostly cerium oxide. When the engine was run, the catalytic coating:

- decreased the unburned hydrocarbon proportion by half under cruising conditions and 30 to 80 per cent under full throttle, but had little effect during deceleration
- decreased the carbon monoxide ratio by 10 per cent at low speeds, 20 per cent under full throttle, and about 40 per cent on slowing down.

The researchers believe that the catalyst would have had even more effect if the cylinder heads had also been coated.

This project has stimulated great interest throughout industry. One of the nation's largest gas turbine manufacturers is studying the use of the coatings on turbine blades. Since these coatings have excellent high-temperature characteristics, they could protect the blades as well as promote engine efficiency.

The ability of rare earths coating to reduce carbon monoxide is of particular importance in efforts to decrease accidents. A recent study indicates that carbon monoxide—even in very small amounts—slows driver reflexes.

There are also some applications for the rare earths that the AEC is keeping secret. If these applications are ever released for civilian use, they might help the lagging atomic energy industry.

Pharmaceutical Uses Studied

The rare earths may some day have an important place in medicine. Many pharmaceutical houses are studying nearly all the rare earths in compound form, and radioactive thulium is employed in portable X-ray sources. When the dramatic results of pharmaceutical research are considered (potent new preparations appear with such frequency that they can no longer be termed "miracle drugs"), it is not presumptuous to predict that there will some day be new drugs containing rare earth compounds.

Although the prices of the rare earths have been dropping steadily, they are still out of shouting distance for tonnage customers. Present prices reflect the pinch-at-a-time use of the rare earths characteristic of industry today. The prices of the heavier, scarcer rare earth compounds have been dropping faster, because they were the most expensive and because uses for them are just coming to light.

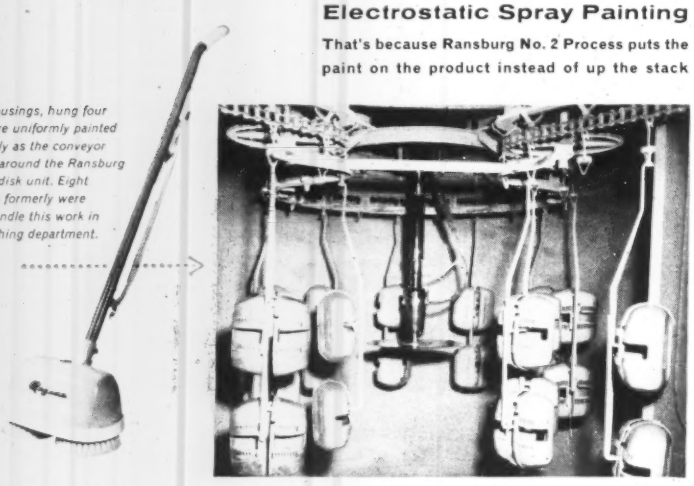
Since only small amounts of the rare earths are used in any one application, any great change in the price would have little effect on the over-all price of the final product. And there is plenty of evidence that

Regina Reports 50% Paint Saving with RANSBURG NO. 2 PROCESS

Electrostatic Spray Painting

That's because Ransburg No. 2 Process puts the paint on the product instead of up the stack

Aluminum housings, hung four to a fixture, are uniformly painted electrostatically as the conveyor makes a loop around the Ransburg reciprocating disk unit. Eight hand sprayers formerly were required to handle this work in Regina's finishing department.



The Regina Corporation, Rahway, N. J., replaced hand spray with Ransburg No. 2 Process to paint their twin-brush Floor Polisher and Scrubber, and their Electrikbroom.

Now, a single reciprocating disk unit automatically handles the work which formerly required eight hand sprayers. Even with increased production, Regina is using 50% less paint. Quality of the work is improved with maximum uniformity on all parts.

NO REASON WHY YOU CAN'T DO IT, TOO!

Want to know what Ransburg No. 2 Process will do for you in your finishing department? If your present production justifies conveyorized painting, let us prove the many cost-saving benefits which can be yours. Write for our No. 2 Process brochure which pictures many on-the-line examples of electro-coating on a wide variety of products, and describes our free survey service.

Ransburg ELECTRO-COATING CORP.
Indianapolis 7, Indiana

RANSBURG

consumption would go up little even if prices went down. In fact, one rare earths supplier conceded that there is something of a price war on now, and it hasn't done much for the industry's excess capacity.

However, there definitely are some applications that would benefit from lowered prices. For example, W. B. Silverman of the Owens-Illinois Glass Research Center states that if the price of cerium oxide went down, purchases by the glass industry would rise. Increased consumption will just have to wait patiently for the sometimes tedious evolution of exploratory programs into commercial products.

Although most of the rare earth metals and compounds used in this country are produced from foreign ores, domestic supplies would be sufficient if we were ever cut off from the richer deposits in South Africa and Brazil. Molybdenum Corporation of America owns a whole mountainful of one rare earths ore in California, and Heavy Minerals Company, Chattanooga, Tenn., is producing the rare earths from its own deposits of monazite.

Buying the Rare Earths

For the small quantities usually needed during the early stages of an experimental project, the logical supplier might be found among the many retail distributors of fine chemicals who also carry the rare earths. As these elements and their compounds become more important in industry, it will be as easy to buy them as any fine chemical. Once a company has developed a major application for a rare earth, it can go to any one of a half dozen prime producers, who are prepared to ship the rare earths in volume.

Most of the American research into new industrial applications for the rare earths is conducted at about three independent contract research laboratories. Just a few key companies maintain their own full-time researchers in the field, although a number say that they always have someone giving some attention to the rare earths.

Even though there is no across-the-board drive for new applications under way, those in the field are invariably optimistic when asked to predict the potential of the rare earths in industry. But these authorities have no firm feeling about when

Corning Glass Works

The face of a TV picture tube is being polished with cerium oxide. The rare earths are also widely used in making glass and for the improvement of optical qualities.

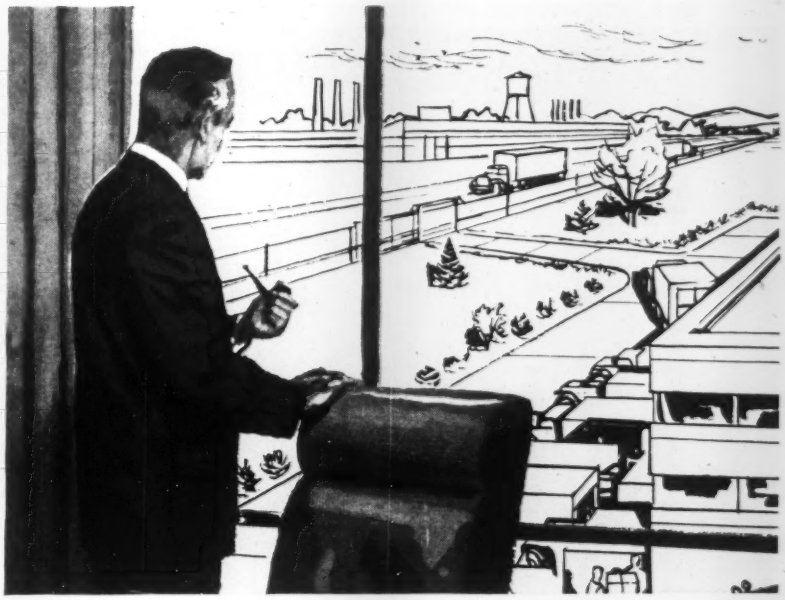
it will come to fruition or in what new forms. By its nature, research seeks the unknown.

The American scientists or laboratories connected with the rare earths have little direct knowledge of Soviet activities in the field. But most surmise that the heavy Russian involvement in nuclear power and weapons has led to investigation of the rare earths, and one expert believes the Soviets are on a par with the United States. The Russians had a big display of the rare earths at the 1955 Atoms-for-Peace Conference in Geneva.

With so many of the leaders in rare earths research in this country, the United States is ahead in rare earths research and technology. But we have no more of a monopoly in the field than in any other branch of science.

The recent history of the rare earths has been dominated by military technology and its by-products. Where the Government has not paid the bill, research has subsisted on the "petty cash" level, a situation characteristic of many other research fields in America. There are still few instances where the rare earths could not be replaced, if necessary, by some slower, less efficient, or more costly technique. But technical advances and a greater national urgency are luring progressive companies to explore this potentially rich vein.

END



Have you noticed the big job the motor carrier is doing these days? Over 300,000,000 tons last year. More than 74,000,000,000 miles.

Yet (have you noticed this), despite the ever-increasing demands upon the trucking industry...

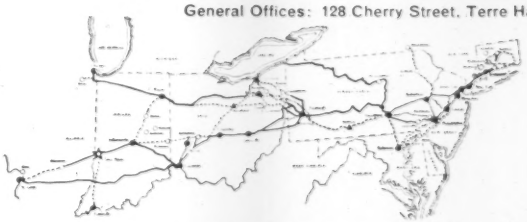
despite the pressure and responsibility...

Notice the care and consideration with which these carriers handle their vehicles and their cargoes.

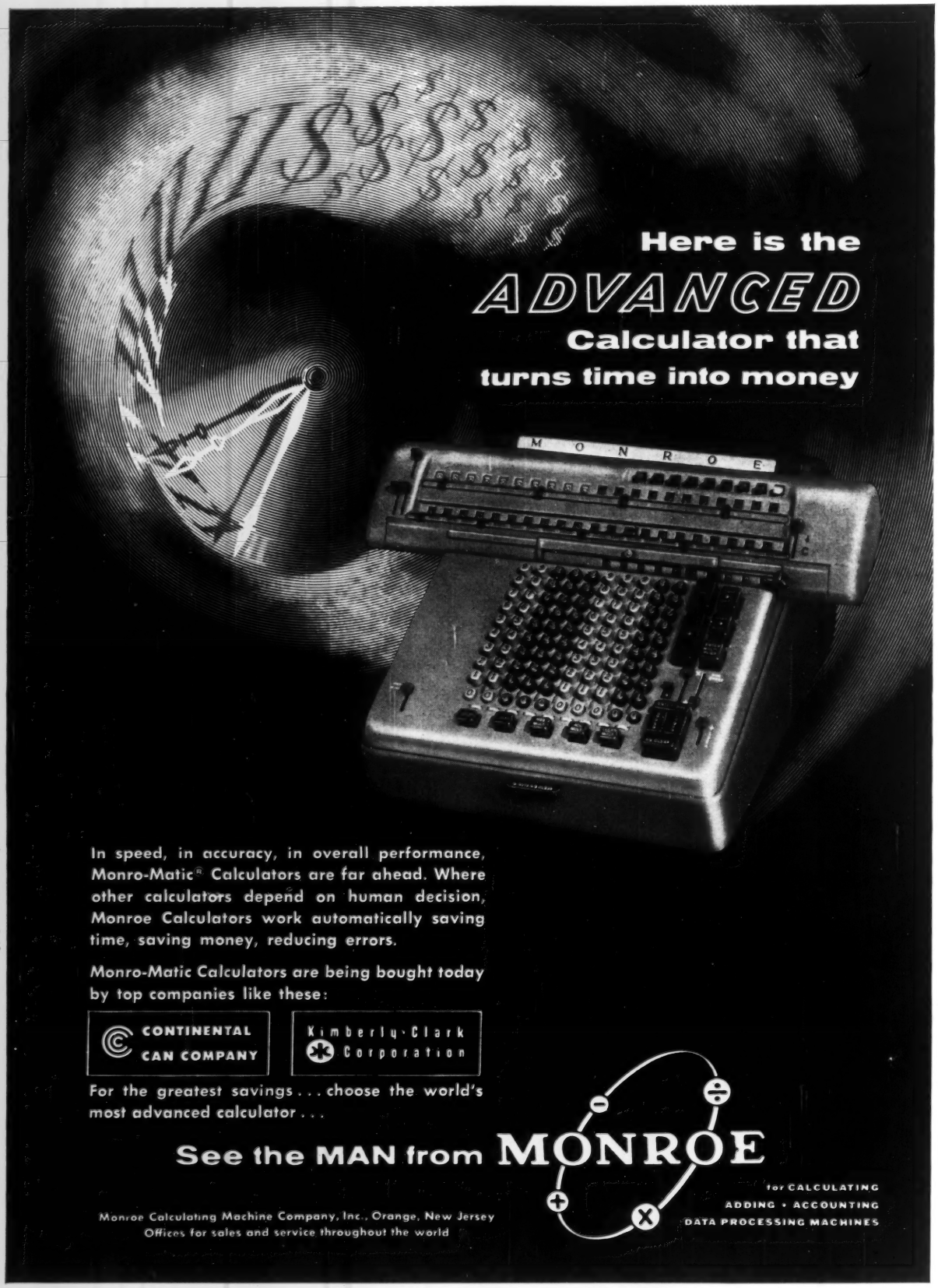
Notice, especially, the record number of safe miles achieved by such safety and claim-prevention leaders as

Eastern EXPRESS, INC.

General Offices: 128 Cherry Street, Terre Haute, Indiana



Connecting the Midwest with the Eastern Seaboard: Baltimore • Bethlehem Bridgeport • Chicago • Cincinnati • Cleveland • Columbus • Dayton Evansville • Fort Wayne • Harrisburg • Indianapolis • Jersey City Metuchen • Philadelphia • Pittsburgh • St. Louis • Trenton • Zanesville


Here is the
ADVANCED
Calculator that
turns time into money
MONROE
In speed, in accuracy, in overall performance, Monro-Matic® Calculators are far ahead. Where other calculators depend on human decision, Monroe Calculators work automatically saving time, saving money, reducing errors.
Monro-Matic Calculators are being bought today by top companies like these:
CONTINENTAL CAN COMPANY
Kimberly-Clark Corporation
For the greatest savings . . . choose the world's most advanced calculator . . .
See the MAN from MONROE
for CALCULATING
ADDING • ACCOUNTING
DATA PROCESSING MACHINES
Monroe Calculating Machine Company, Inc., Orange, New Jersey
Offices for sales and service throughout the world

Executive BOOKSHELF

Automation and team spirit

TOWARD THE AUTOMATIC FACTORY: A CASE STUDY OF MEN AND MACHINES *by Charles R. Walker. Yale University Press, New Haven, Conn., 232 pages, $5.*

The U.S. Steel Corporation's Number 4 Seamless Mill at Lorain, Ohio, the first continuous seamless pipe mill in the country, was opened in January 1949. With a production force less than half that of conventional plants, it can produce four times as much.

In a project financed by the Yale University Institute of Human Relations, the author of this book has been studying the attitudes of the workforce and the relations between management and labor since the start of operations at Number 4. His findings suggest that the "automatic factory" provides a far greater opportunity to develop a spirit of teamwork than the plant where operations are discontinuous, but that a high degree of management skill is needed to realize the potential.

In the new mill, Mr. Walker points out, "the worker is close to the product—not to a minute part of it, as in an automobile assembly plant, but to the whole of it." This in itself, he believes, should provide greater work satisfaction. "I'd like to do a whole fender myself from raw material to the finished job," an automobile assembly worker told him.

On the negative side, workers in an automatic plant tend to feel that their chances of promotion are reduced. The future, they say, belongs to the "college boys, the slipstick men, the engineers." And they may well be right if management does not step up technical training, for the chain of command is shorter in an automated factory and there are fewer rungs on the ladder of advancement.

Common sense about advertising

MAKING ADS PAY *by John Caples. Harper & Brothers, 49 East 33rd St., New York 16, 248 pages, $4.50.*

Mr. Caples is the author of the immortal lines, "They laughed when I sat down at the piano" and "They grinned when the waiter spoke to me in French." *The New Yorker* interviewed him about these early triumphs and reported, "We asked him how his inspiration came to him, and found him as inarticulate as a poet on that score."

The question, Mr. Caples says,

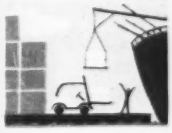
Toward the Automatic Factory

In this view of the "hot end" of the Number 4 Seamless Mill, the man on the bridge is watching the flow of the product and is ready to press a button or use a lever if anything goes wrong. The man making an adjustment on the rolls is the technical leader of the crew.

Living is BETTER in industrial LONG BEACH, Southern California

You'll enjoy Long Beach living, once your plant is operating here—and so will your employees. At the beach, on the water, in the mountains, you'll see them playing, weekend on weekend, all year 'round. Restful parks, fishing piers, boating, golf and amusement centers complete the happy picture. Beyond matchless recreation are superior schools and colleges, 175 churches, many libraries, top professional care to enrich your life here. It's a delight just to live in the sun and clean air of busy Long Beach.

A Great Modern Port also helps make living better in Long Beach



Throughout the year, nearly 2,000 ocean vessels call at the Port of Long Beach, discharging millions in goods and money. Last year 7,655,618 tons of cargo crossed the wharves of America's Most Modern Port. World trade brings us enjoyment of foreign products, and in turn enables our manufacturers to sell their goods in foreign markets.

Good living in Long Beach, enjoyable and profitable, is just one of 12 key advantages in a Long Beach plant location for your industry.

Send for these!

Long Beach Chamber of Commerce
121-D Linden Avenue
Long Beach 2, California

☐ Please send literature on industrial Long Beach
☐ Send your Port magazine, "Harbor Highlights"

Name _____
Address _____
City _____
State _____

LONG BEACH, CALIFORNIA

Order buildings like other standard tools...

When... Wherever you need them

Economy, speed, efficiency can be realized by standardizing the construction of factories, just as you standardize manufacturing or purchasing. Whether you plan to build one or a hundred factories, the unique combination of Butler buildings and the nationwide network of Butler Builders enables you to build efficient factories faster, more economically than with traditional construction methods. Pre-engineered buildings can be delivered from stock—eliminating much routine engineering time.

Precision-made components assemble quickly, reduce construction time by weeks . . . even months.

Your Butler Builder can help you develop a practical, standardized building program. You can then build the factories you need . . . wherever you need them . . . quickly, permanently . . . economically.

He's listed in the Yellow Pages of your phone book under "Buildings" or "Steel Buildings." Or write direct.

BUTLER STEEL PRODUCTS

BUTLER MANUFACTURING COMPANY

7417 East 13th Street, Kansas City 26, Missouri

Manufacturers of Buildings • Oil Equipment
Farm Equipment • Dry Cleaners Equipment
Outdoor Advertising Equipment
Custom Fabrication

Sales offices in Los Angeles and Richmond, Calif. Houston, Tex. • Birmingham, Ala. • Atlanta, Ga. Kansas City, Mo. • Minneapolis, Minn. • Chicago, Ill. • Detroit, Mich. • Cleveland, Ohio • New York City & Syracuse, N.Y. • Washington, D.C. Burlington, Ont., Can.

What would become of her *if something happened to you?*

YOU will find a glorious answer to this question in the letter printed below. In a wife's own words, it tells how a husband's foresight saved the family from disaster.

"My husband went to his office as usual Saturday, May 28," the letter reads. "Returning from the ball game that afternoon he was thrown from the automobile and met his death.

"I had never considered the problem of what his death would mean to me. I had practically no cash. Almost every dollar we had was spent on educating our son, who had just finished his course in the School of Dentistry. We were paying for our home and were pretty hard pressed financially, but happy in the fact that we had almost reached the goal toward which we had struggled for four years."

A family crisis

What happened to this family? Did the son have to give up dentistry and take the first job he could get? Was the mother forced to seek employment?

No. Almost the next day this woman received a check from the Phoenix Mutual Life Insurance Company. Here is what she says:

"You will be glad to know, I am sure, what this check has meant to me, without it our situation would surely have been deplorable. All the money in the world would not compensate me for the loss of my husband. But how much greater the problem would be without money. This insurance enables me to pay all my bills, give my son his initial start in business and still have a surplus.

"I trust my experience may be helpful to others, that they may consider their responsibilities as my husband did his. It is the unexpected that always happens."

What would become of YOUR family if something happened to you? The answer depends on you.

The most misunderstood investment in the world

Many people have the wrong idea of Life Insurance. They think of it as rather an unpleasant thing—something to be thought of wholly in connection with death. How far from the truth!

The minute you make your first deposit, you begin to feel the wonderful benefits of Life Insurance! Money worries disappear. A comfortable future is insured for your family. Your home is made permanent and safe.

Why, Life Insurance is the warmth of a cosy home—the laughter of children trudging off to school—the books they carry—the shoes they wear. Above all, it is the gift to children of their mother's time—a gift easily purchased now, but priceless some day when needed most.

The Free Book explains it

Other wonderful benefits of Life Insurance are told in a 24-page booklet, which will be sent you without obligation. This booklet tells how you can retire when you are 65—how you can leave your home free of debt—how you can send your children to college—how you can make sure your income will go on even though you become permanently disabled—how you can leave an income for your family.

What would become of your family if something happened to you? The answer is in your hands NOW. Just mail the coupon.

* *To name and address of the writer of this letter will be sent on request. We refrain from printing her name because of the confidential relationship that exists between us and our clients.*

PHOENIX MUTUAL LIFE INSURANCE COMPANY
Home Office: Hartford, Conn. First Policy Issued 1851

PHOENIX MUTUAL LIFE INSURANCE CO., 100 Elm Street, Hartford, Conn.
Send me by mail, without obligation, your free book, "How to Get the Things I Want."

Name ..... City .....
Business Address ..... State .....
Home Address ..... Date of Birth .....

THE PHOENIX MUTUAL LIFE INSURANCE COMPANY
of Hartford, Conn.

announces a new

RETIREMENT INCOME PLAN

under which you get not only immediate protection for your beneficiaries but also, for yourself in later years, *a guaranteed income you cannot outlive.*

What a dividend paying $10,000 policy will do for you

It guarantees to you when you are 65
A MONTHLY INCOME FOR LIFE OF $100.00
which assures a return of at least $10,000.00
and perhaps much more, depending upon how long you live. Or, if you prefer,
A CASH PAYMENT AT AGE 65 OF $12,000.00

It guarantees upon death from any cause before age 65
A CASH PAYMENT to your beneficiary of $10,000.00
Or $50 a month guaranteed for *at least*
24 years and 8 months ..... Total $14,824.00

It guarantees upon death from accidental means before age 60
A CASH PAYMENT to your beneficiary of $20,000.00
Or $100 a month guaranteed for *at least*
24 years and 8 months ..... Total $29,648.00

It guarantees in event of permanent total disability before age 60
A MONTHLY DISABILITY INCOME OF $100.00
And payment of your premiums while disabled

For more information, mail the coupon below.

PHOENIX MUTUAL LIFE INSURANCE COMPANY
Elm Street, Hartford, Conn.
Please give me full information about your new
RETIREMENT INCOME PLAN
Name .....
Street .....
City ..... State ..... Date of Birth .....

Can you guess which of these ads pulled better? Even though it broke all the rules—no picture, short copy, unexciting head, and the opinion tests were against it—the right-hand ad came out a 5-to-1 winner when both ads were tried out in the same publication.

took him by surprise, and that is why he was unable to answer. Actually, he knew exactly how he arrived at the idea, and he tells the whole story in this book, which is a practical compendium of copywriting know-how acquired during a 30-year career in advertising. Mr. Caples is, in fact, both articulate and definite, even on such rather nebulous subjects as "how to get ideas," "how to write headlines," and "how to write the first paragraph."

Particularly interesting is a chapter contrasting copy appeals that succeeded with those that failed. Here, the reader gets a chance to test his own judgment before the answers are given. For example, one advertisement for a hairset lotion read, "Girls, want quick curls?" The other asked, "Does he still say, 'You're lovely'?" Which one pulled better?

Those who have studied psychology not wisely but too well will have no hesitation in picking the second. But the first drew three times the response. Why? Mainly because it's far from easy for the reader to believe that the product will really make men say, "You're lovely."

In trying to latch on to the major human drives (success, security, sex, and so on), copywriters tend to lose sight of the fact that products have specific uses, and that sometimes the sensible headline is the one that sells.

Mr. Caples does not discount the value of psychology in analyzing what will appeal, but he does plead for more judgment in using it. "Don't try to sell everybody and end up selling nobody," he says.

His common-sense viewpoint and his skilful presentation will make the book valuable both to those who write advertisements and to those who pay for them.

Sharing the decisions

MAKING MANAGEMENT HUMAN *by Alfred J. Marrow. McGraw-Hill Book Company, Inc., 330 West 42nd St., New York 36, 241 pages, $5.*

The Harwood Manufacturing Company has 1,200 employees and five

GOOD WAY TO LOWER YOUR INVENTORY– SHIP UNITED AIR FREIGHT

Your inventory seeks its lowest practical level when you ship by United Air Freight.

You can centralize operations, replenish stocks on demand in a matter of hours. No need to maintain costly warehouses in all your markets. You can reserve air freight space on one of United's more than 900 daily passenger or all-cargo flights. And you can depend on United's fleet-wide radar for top on-time performance.

Add to these features the low packaging and insurance costs, nation-wide market coverage and personalized service that begins the minute you telephone, and you have distribution unmatched in efficiency.

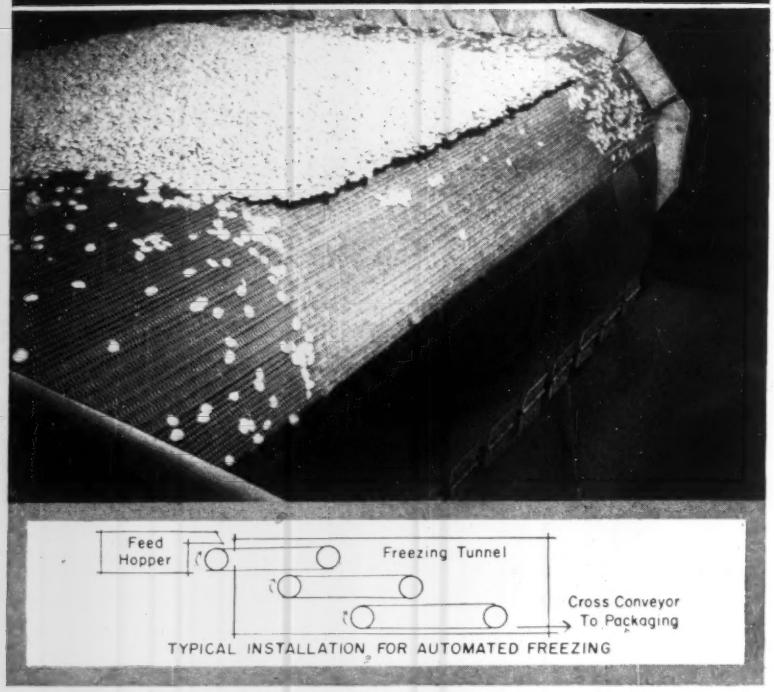
The cost? United shippers report over-all distribution costs are actually lowered by shipping United Air Freight. Ship United and see for yourself.

For service or information, call the nearest United Air Lines representative or write Cargo Sales Division, United Air Lines, 36 South Wabash Avenue, Chicago 3, Illinois.

It costs no more for extra dependability —on United, the Radar Line

UNITED AIR LINES

Cambridge WOVEN WIRE BELTS



All-metal belts cut costs, increase production in continuous processing

Whether you process foods, plastics, ceramics, metals or chemicals, Cambridge Woven Wire Belts help you maintain high product uniformity and capacity production. Free circulation of gases, liquids, heat or cold through open mesh of belt assures faster, more thorough processing of products. Continuous movement of products on endless Cambridge belts through wet, dry, hot or cold operations eliminates batch handling and lowers operating costs. Here's why:

ALL-METAL BELTS ARE HEATPROOF, RUSTPROOF; take up to 2100° F. and sub-zero temperatures; resist corrosive attack; won't absorb oils, grease or odors.

WOVEN WIRE CONSTRUCTION MEANS LONGER SERVICE; there are no seams, lacers or fasteners to wear or break.

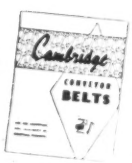
SPECIAL ATTACHMENTS ARE AVAILABLE; raised edges or cross flights to hold product on belt during inclined movement.

Ask your Engineering Department to contact your Cambridge FIELD ENGINEER soon. He'll explain how continuous processing on Cambridge belts can increase production and lower operating costs. And, he can recommend the belt size, mesh or weave—in the metal or alloy—best suited to your operations. He's listed in the classified phone book under "BELTING, MECHANICAL". Write for your personal copy of 130-PAGE REFERENCE MANUAL illustrating ways in which other manufacturers have employed Cambridge belts.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

Department Y, Cambridge 2, Maryland



OFFICES IN PRINCIPAL INDUSTRIAL CITIES

plants. Its president is a social psychologist who has had the courage to put his ideas about group participation in decision making into practice.

In this book, he reports on experiments in his own plants and others and describes his theories of, and experience in, communication, leadership training, incentives, and similar matters.

Some people may be annoyed by his use of such cozy words as "togetherness" or the occasional sociological jargon that creeps in, but for the most part Dr. Marrow has written on an interesting theme in an interesting way. And if he sounds a bit like a do-gooder, it must be remembered that his theories have worked for him in the tough, competitive men's clothing industry. In fact, as he suggests, it may be that where participation appears to have failed it was never actually tried. Too often, he points out, the participation meetings are merely window dressing, "charades" intended to win employee acceptance of decisions management has already made and has no intention of rescinding.

The "how" of market research

MARKETING RESEARCH *by Richard D. Crisp; McGraw-Hill Book Company, Inc., 330 West 42nd St., New York 36, 810 pages, $7.50.*

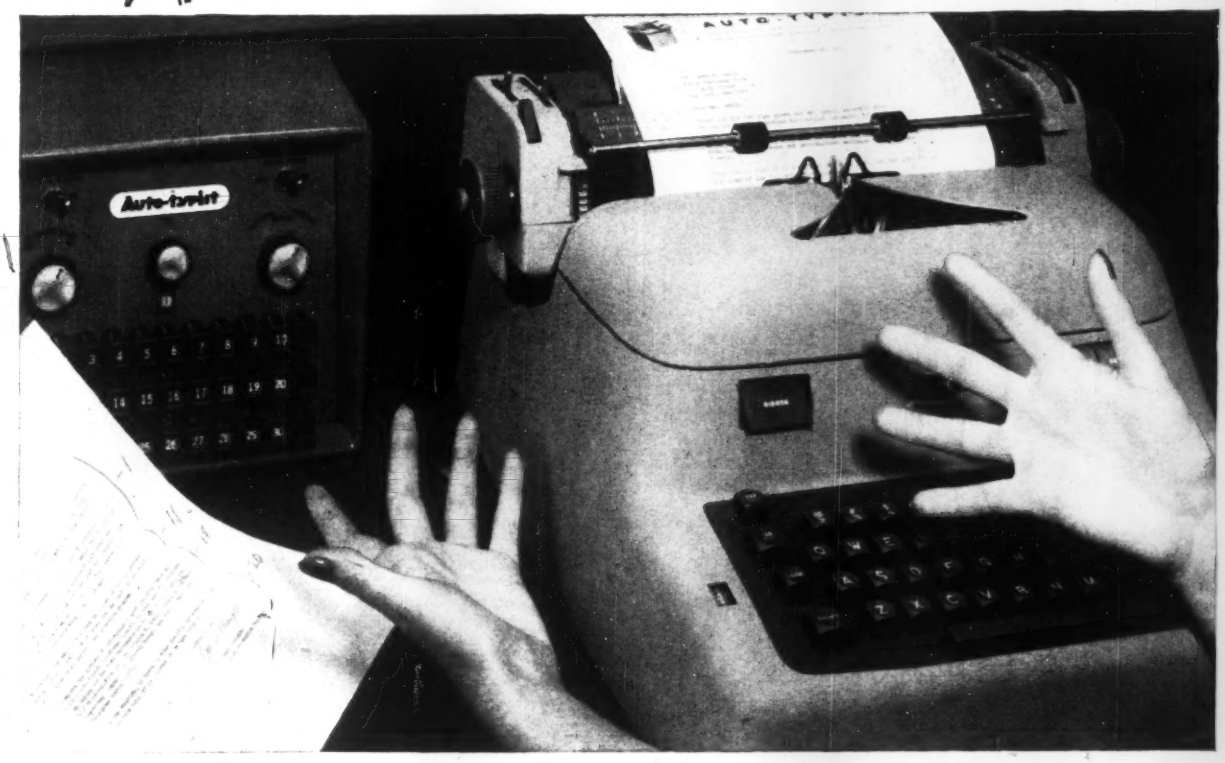
It is not feasible, of course, to explain "all about marketing research" within the compass of a single book, but Mr. Crisp has come remarkably close. He covers the organization of the function, the tools and techniques, the definite steps to take in conducting a research project, and the various uses to which marketing research may be put.

Though the book is primarily intended for the professional market researcher, it may possibly have even greater value for the company that cannot afford to conduct expensive surveys, for it gives the sources of data already available—from the government and others—and explains how to evaluate internal data from the company's own records.

Mr. Crisp, who has had more than twenty years' experience in marketing and advertising, is the author of the article, "Getting More for Your Marketing Dollar," which appeared in the November 1957 issue of DR&MI.

A flip of the switch...a press of the button...

LOOK, NO HANDS



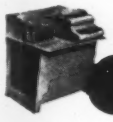
Auto-typist eliminates routine typing and dictation...by automation

Auto-typist brings you office automation! It's the fastest, most accurate way to handle all repetitive correspondence . . . and it's true that well over half of general office correspondence is routine, or follows a standard form. Sales letters, order acknowledgments, answers to inquiries, collection letters, just to name a few, can be handled efficiently *and economically* by Auto-typist. Any one of your girls can turn out 125 letters a day with an Auto-typist—3 to 4 times normal manual typing output. Any standard office typewriter can be converted into an automatic typing machine—and one average typist can operate as many as four Auto-typists.

How Auto-typist works . . . Carefully prepared letters or paragraphs are perforated on a paper roll which operates the typewriter keys . . . similar to a player-piano roll. Twenty or thirty complete letters can be included, or a series of paragraphs which can be combined to make up many letters.

Salutations are manually typed, then, by merely pushing the numbered button or buttons that correspond to the letter or paragraphs desired, Auto-typist automatically picks out the letter, or assembles the paragraphs in proper order, and types it *perfectly!* Manual insertions can also be made at any point desired.

The Auto-typist method . . . the perfect push-button method of typing automatically...offers definite savings to every cost-conscious organization. Write for free booklet.



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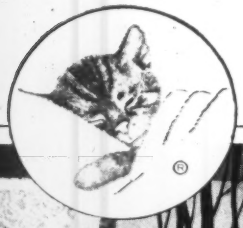

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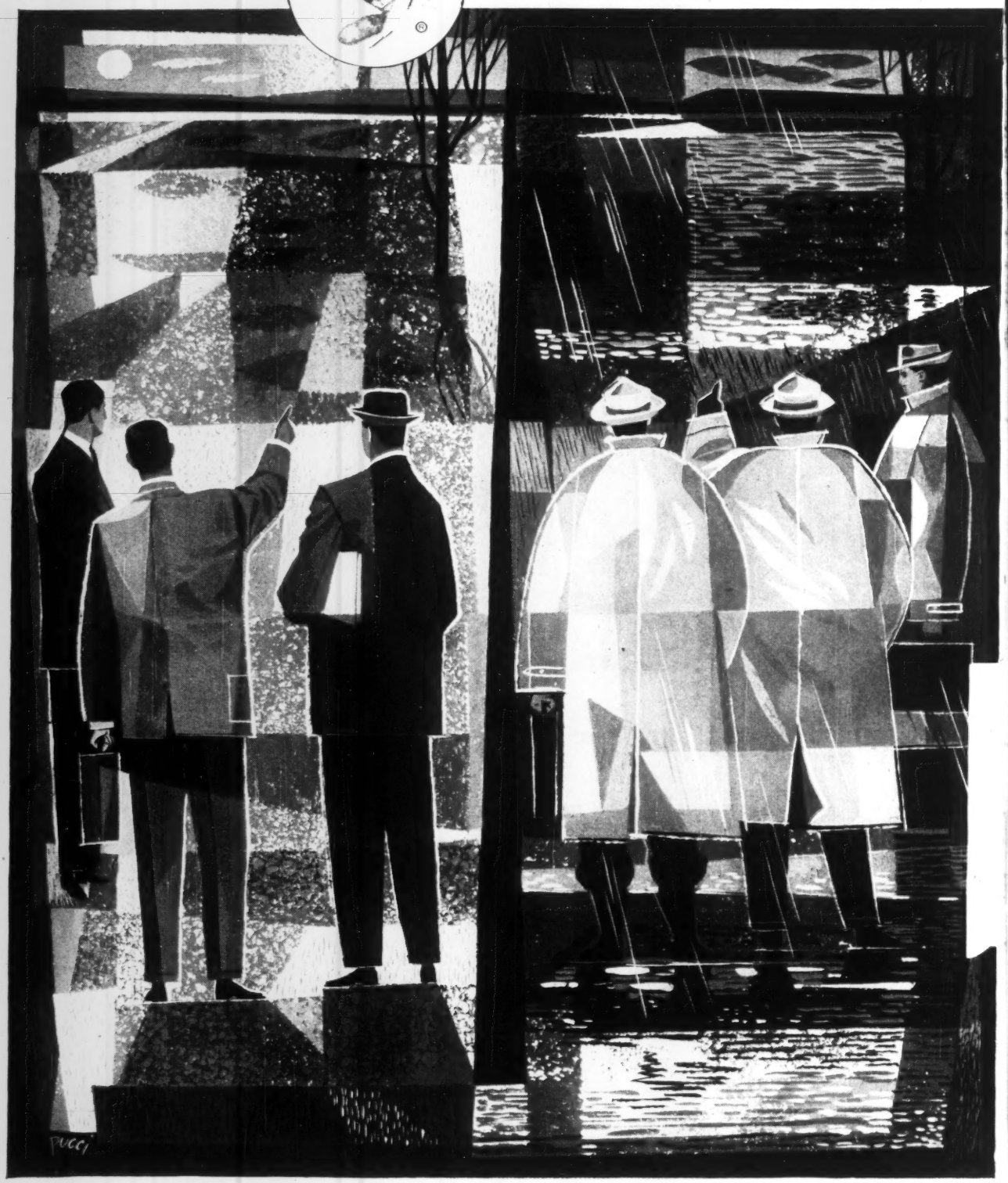

It looked different in the rain

The committee chosen by the company to pick the new factory site made their decision on a sunny day. When they returned after a few days of wet weather they found several inches of water covering much of the tract.

It seemed they would have to give up this otherwise ideal property and they turned to the Chesapeake and Ohio Industrial Development Department for help in finding an alternate location. But before proposing a different site, the C&O Industrial Representative asked the committee to let him take a look at the site they themselves had chosen.

With the help of C&O staff engineers, he worked out a practicable drainage plan. Then he presented his plan to the County Drainage Board, tying it in with a master trunk storm sewer system. Everybody profited. The company got just the location it wanted. The county got a new taxpayer that would quickly pay the drainage cost.

There are many ways in which the specialists of C&O's Industrial Development Department can help you. They have an intimate knowledge of local labor, taxation, geology, water. And they have an extensive personal acquaintance that can be invaluable when you need a trustworthy emissary to carry out delicate negotiations. This confidential service is available to you without cost. Write or phone: Wayne C. Fletcher, Director of Industrial Development, 1103 C&O Building, Huntington, West Virginia.

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Columbus, the state capital, offers exceptional facilities for education and industrial research. It has many manufacturing plants, and is also an important distributing center. Under a new zoning ordinance, a tract of nearly a thousand level acres on the southern outskirts is now available for industrial development. The land lies on both sides of the C&O mainline. A 16-inch high-pressure gas main and a 138 KW electric line run close to the property and the county will extend water and sewage service as needed.

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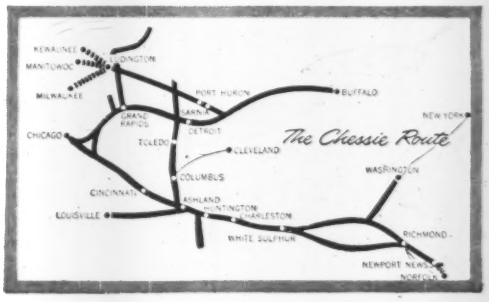

planning to locate

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PLANNING PERSONNEL

continued from page 37

need competent people. Successful change cannot be accomplished without them.

Since details of next year's personnel training assignments may still be in the heads of methods men or on the drawing boards of the engineering department, you can't always plan in specific detail. But you do have to have people available who are capable of absorbing training when the time comes for them to take on new assignments.

Coordination of hiring and training programs with new developments can cut down the time gap between the experimental product and full-scale production. The man-hours needed to get production under way after a methods revision in the manufacture of old products can also be reduced if employees are told what to expect, and are sold on the need for it. A flexible workforce, composed of men and women to whom change is a challenge and a stimulus, is an accurate index to planning foresight.

Automation in the Office

Automation may have an even more dramatic impact on the white-collar employee. Electronic data-processing machines will significantly affect the work of clerical workers. For example, the U.S. Steel Corp. has a data-processing system for simultaneously translating orders, by means of tapes, into production, scheduling, traffic, and shipping orders for the plants concerned. This system also provides volume and income information for the company's financial records. It automatically bills, invoices, and prints notices to customers. The Bank of America owns a 25-ton bank clerk, a machine known as "Erma." Erma handles the bookkeeping for 50,000 accounts a day.

You can see what that means for employment and work assignments. Men and women are relieved of monotonous, repetitious jobs. If your office work is sufficient to permit you to take even partial advantage of work-cutting machinery, you can begin to plan for it. In the future you will probably need fewer purely manual clerks. Obviously, then, it is up to you and your management to analyze your office operations to

and an integrated management effort ... should assume the responsibility for ... from technology, regardless of the

find out how much they will be affected by the introduction of machines, calculate to what extent the workforce can absorb those members of your clerical staff likely to be displaced by machines, and decide on training programs to accomplish this transition with a minimum of friction.

Insurance, banking, and utility companies, by the nature of their work, have been able to go further faster in automating their office operations than the average manufacturing company. And their experience should be helpful to other managements that are planning ahead in this field. But the intensely competitive nature of manufacturing firms may make the impact of automation on their office forces more severe.

Time to Prepare

Conclusions about the effect of automation on office assignments will naturally be based on type of business and the practicability, from a dollar-and-cents point of view, of introducing computing equipment. However, certain speculations on the nature of tomorrow's white-collar workforce may be helpful in planning future employment needs in this field.

You have time to plan. Analyze the speed with which you expect to automate your office and gear your hiring program accordingly. Machines can take on some of the repetitive or mechanical chores now performed by clerks. And ten years hence, you probably won't need so large an office force as you have now. Analyze the age groupings and work assignments of your white-collar people. Check your labor turnover and program your replacement needs with this in mind. You probably have men and women already on your payroll who are equipped to do most of the jobs that will result from automation, but you will need training programs to prepare them for these assignments.

First, determine the kind of equipment you will install—long-range. Next, select the persons best fitted to operate it. In this way, training becomes a step in a logical process. A policy of promotion from within should also be followed. Above all, keep your employees fully informed of what you are doing about automation and how it will affect them.

It's a job for integrated planning.

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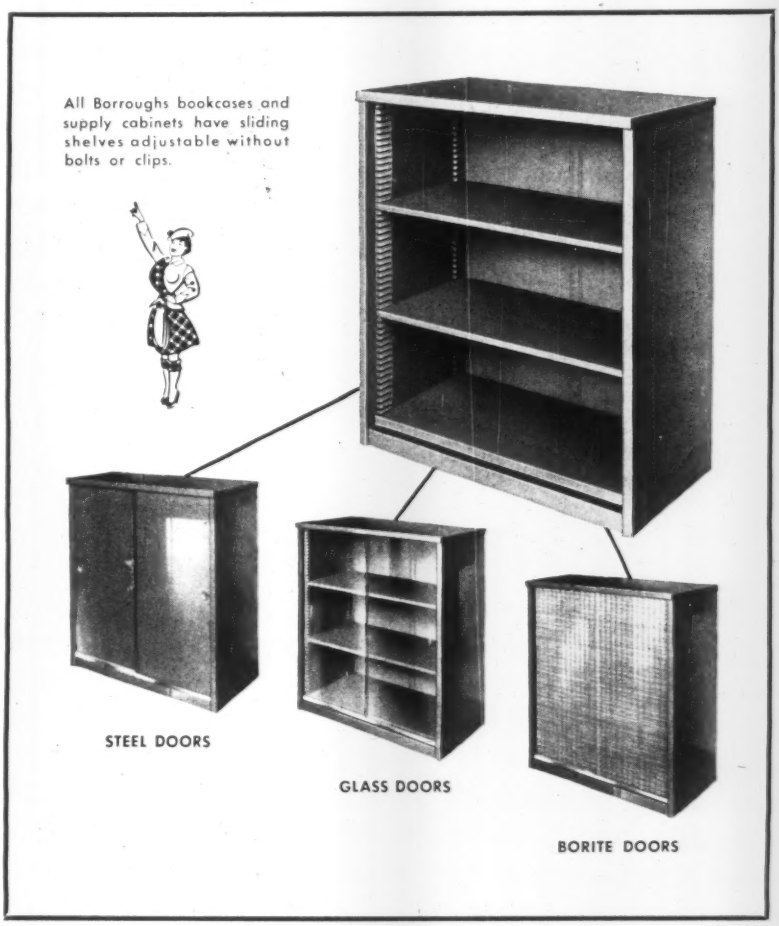
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and an integrated management effort will be needed to develop an office organization as an efficient unit.

Unions and Personnel Planning

Up to this point our discussion has centered around those matters over which industry can exert a good measure of effective control. But organized labor is also doing planning of its own. And some of its ideas on how to achieve an economic basis for a more abundant life run counter to the views of fiscal authorities.

To begin with, labor and its leaders are strongly committed to the theory that higher wages equal more public spending power, and that the two together add up to prosperity. You can punch holes in this argument, but you won't change union opinion. This means that unions will continue to try to get bigger paychecks for their members, regardless of the effect on prices or profits.

Labor has no objection to automation as such. But it wants to make certain that no union member is hurt in the process. This explains its demands for the guaranteed annual wage and higher severance pay, and its argument that management should assume the responsibility for retraining and replacing employees whose jobs might be endangered by machines.

You can also expect the leaders of labor to continue to push their proposals for security benefits like pensions, insurance, and health and welfare protection. Over the long range, unions are aiming for a shorter workweek because they think it will protect the jobs of members who might otherwise be the victims of progress.

Spreading the Leisure

Their argument is that rising productivity will permit a reduced workweek, which will consequently minimize the dislocations in the workforce that improved technology might bring about. Unions have by no means secured their objectives so far as the guaranteed annual wage is concerned. But they have made a start. Even if the 36-hour week doesn't become a bargaining issue this year, the progressive shortening of the workweek will remain a long-term union goal.

Organized labor is determined to protect the jobs of its constituents from technology, regardless of the over-all good that will come from greater production efficiency. The UAW maintains that "provision must be made so that those immediately affected [by automation] do not suffer in order to provide society as a whole with long-run benefits. In the course of reaching higher living standards, we will not take one step backward in order to take two steps forward."

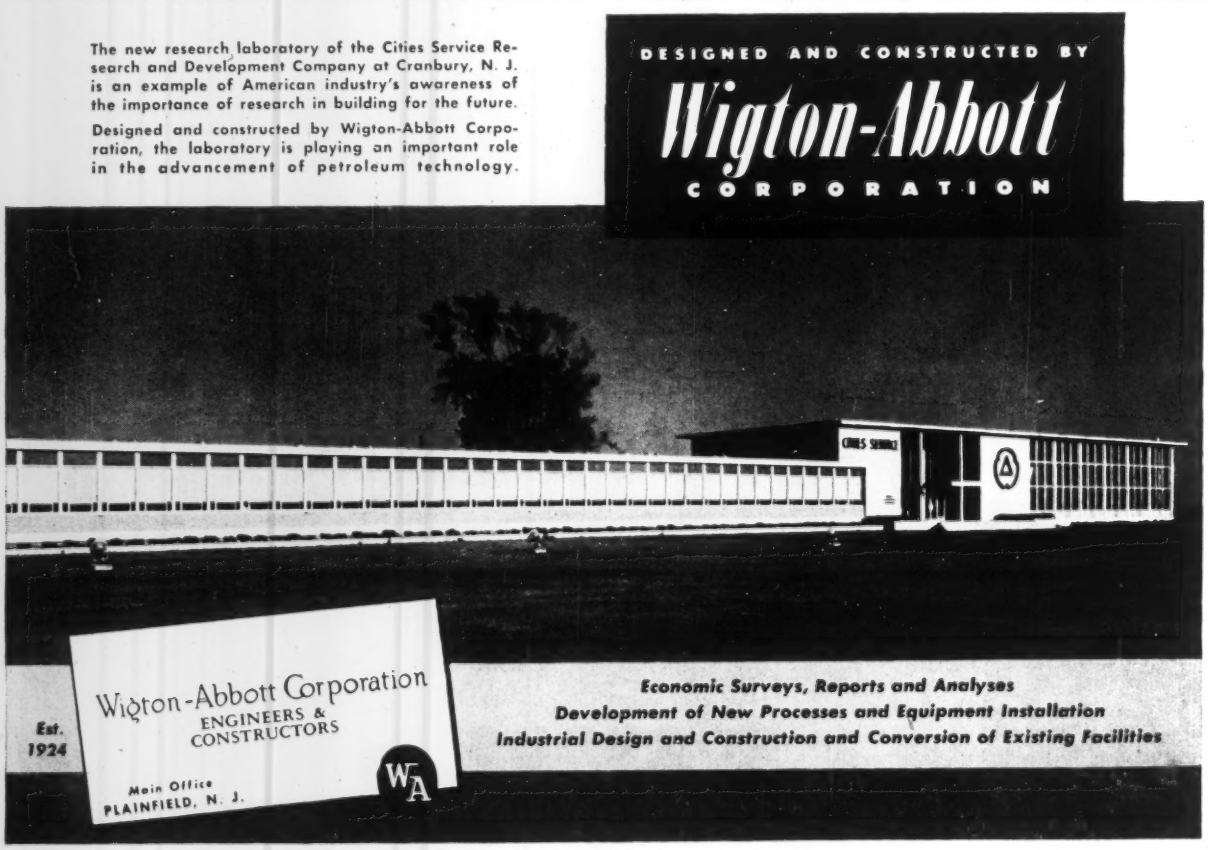
This means that unions don't object to the new industrial revolution if none of their members is hurt in the changeover. And since labor organizations are inherently political, it would be surprising if they assumed any other attitude.

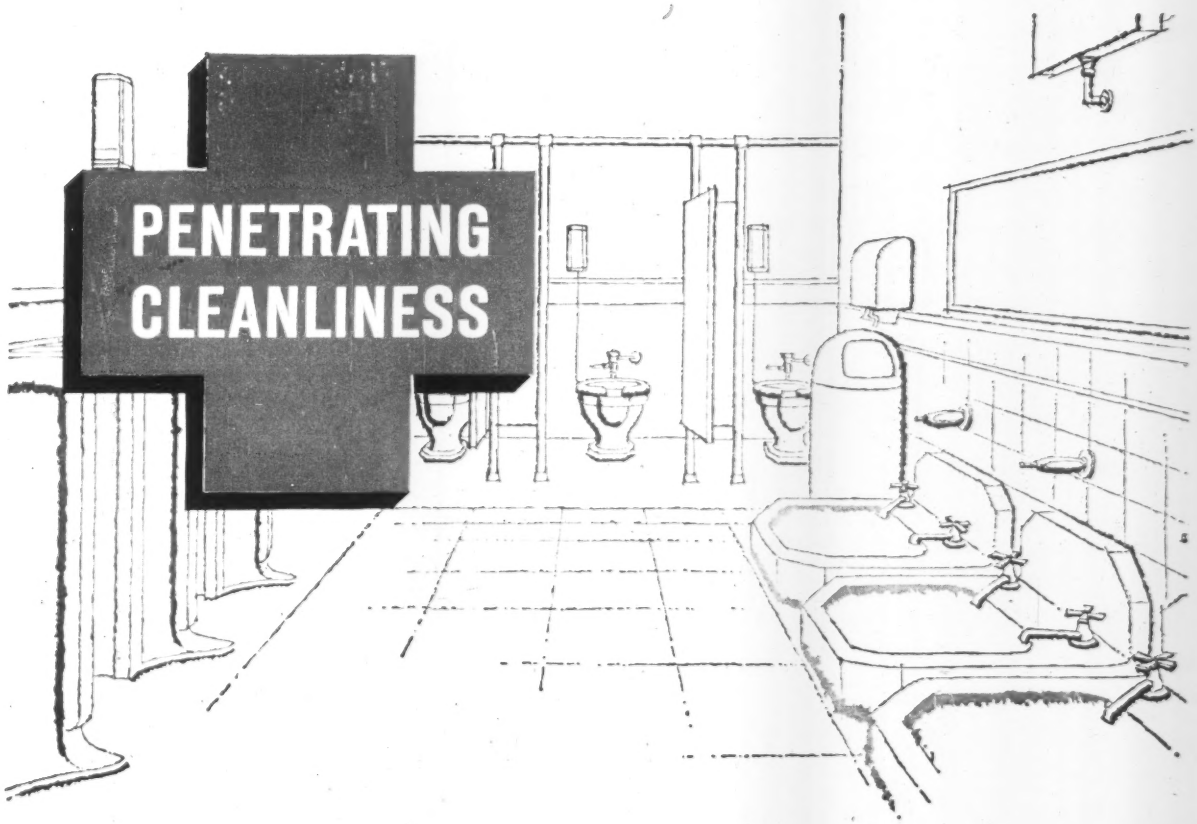
Nat Weinberg, research director of the UAW, summed up labor thinking on welfare benefits at an American Management Association Conference when he said:

> We are not satisfied with existing pension plans or medical care plans. As far as medical care is concerned, we think it analagous to maintenance and repair costs for your equipment in your plants, and we are not going to be satisfied till you are bearing the whole cost of it, and the plans are much more adequate than they are now. We think —in relation both to pensions and to medical

The new research laboratory of the Cities Service Research and Development Company at Cranbury, N. J. is an example of American industry's awareness of the importance of research in building for the future.

Designed and constructed by Wigton-Abbott Corporation, the laboratory is playing an important role in the advancement of petroleum technology.





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care programs—that the ultimate solutions do not lie in the field of collective bargaining, but in the field of national legislation.

This statement reflects only the opinions of the UAW, but their ideas have been a pretty good index to the thinking of all labor since World War II.

Tomorrow's Top Executive

Considering the complexity of the problems that industry must face and solve, it is apparent that every management must develop executives who have a high capacity for leadership, inside and outside the company. This requires planning—long range and comprehensive. Though the specialist-executive will continue to hold his own on the lower rungs, in ten years a competitive company will want a top executive who has a broad understanding of management's duties in a wide variety of fields, some only indirectly connected with business.

Curiously enough, the very development of our complex technology has diminished the importance of the technician who insists on remaining a technician. The intricate interrelationship of human activities means that the main job of top management is to coordinate the work of groups. Of course, this has always been the case. But many factors affect business today that formerly played only a negligible part in the operation of a company. For example, modern management must carefully consider public relations in all its activities. It must assume social responsibilities that were once thought none of its affair. Government significantly affects its functioning, and industry must make itself heard on issues that could once be safely let alone. Every man, woman, and child in this country is now dependent for his material welfare on the success of business. For this reason, the company decisions must be made by men with a broad outlook and a strong sense of their responsibilities to humanity.

Integration Is the Key

Planning ahead in personnel is one of the ways to meet these new responsibilities that business must take on, and it is a job for all management. Admittedly too many intangibles make precise planning impossible. But certain basic facts provide general direction markers. While you follow them, you should also plan to re-evaluate your program almost constantly to make certain it is taking you where you want to go.

The General Electric Company's approach to its personnel problem indicates the importance that major American corporations attach to advance planning in this field. GE's management emphasizes the planned development of people on the basis of four major concepts:

- **Self-development.** The initiative at all times must come from the individual, since no one can force him to develop.

THE AUTHOR • James Menzies Black has had long experience in industrial relations and is the author of many articles on personnel and collective bargaining. His latest book, *How to Grow in Management*, was recently published by Prentice-Hall, Inc. Now on the personnel staff of a large Eastern company, Mr. Black has acquired his broad knowledge of union-management problems and personnel administration in industry and with management associations. He was born and educated in South Carolina.

- **Climate for growth.** This is a function of the company, especially of each local manager. It is up to the leader to "set the tone" and show the way.
- **Manpower planning.** This, too, is up to each manager. He must learn to ascertain how many and what kind of people he will need and how they should be trained.
- **Increased education.** The company believes in offering more educational opportunities within the company, and it also helps to support outside facilities.

What GE is doing makes good sense. For it is developing the right kind of men to direct its operations and to provide the leadership necessary for the company to remain competitive in business and retain its position in the community and the nation. Such men will also see that the right kind of planning is done in research, finance, manufacturing, sales, and personnel.

Fluid Planning

Remember, you are operating today on the plans you made yesterday. At the same time, you are laying the groundwork for what you will do tomorrow.

You know from past experience that things are never exactly the way you thought they would be. This means you must always plan so that you have room to turn easily and move off in a slightly different direction if that becomes necessary—but without losing sight of your goal.

In planning, we are too likely to believe that the patterns of the past are a hard and fast indication of what's to come. As a result, we're often bound by our own rigidity if the unexpected occurs. Generals are said to be always planning for the last war, and economists for the last depression. The Duke of Wellington put it this way: "The battle plans of Napoleon's generals are beautiful. They are like a fine harness on a horse. Their battles go well if the harness doesn't break. I harness my horses with ropes. If a rope breaks, I tie a knot and go on."

All this simply points up the need to plan fluidly. The Georgia Tech football team has a remarkable won-and-lost record. And somehow or other, it always seems to get the breaks. Its rivals, often with a touch of envy, call it lucky. "Not so," says Coach Bobby Dodd. "We plan on profiting from the mistakes of our opponents. And we plan how to take advantage of them when they come."

No Let-up for Winners

You and your management team are running a company. The wisdom of your planning will determine whether or not your company continues to grow and prosper. Other companies are planning how to meet and beat you in the marketplace. In fact, other economic systems are making plans to displace the free enterprise system in which you operate. Competition is too intense for the luxury of relaxation. Your planning must be constant and intelligent.

Charles B. Thornton of Litton Industries says: "I have heard many ask, 'How can long-range planning be done?' The word 'done' is incorrect. Long-range planning is never 'done.' It's never complete. It is a continuous process, never a finished product." But, like the Georgia Tech football team, you can plan to take advantage of opportunity when it knocks. To do this you need alert, capable employees, supervisors, and executives. To get them takes planning—personnel planning—and it's one job that's permanent. END

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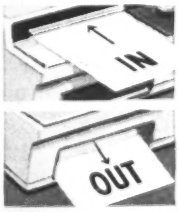

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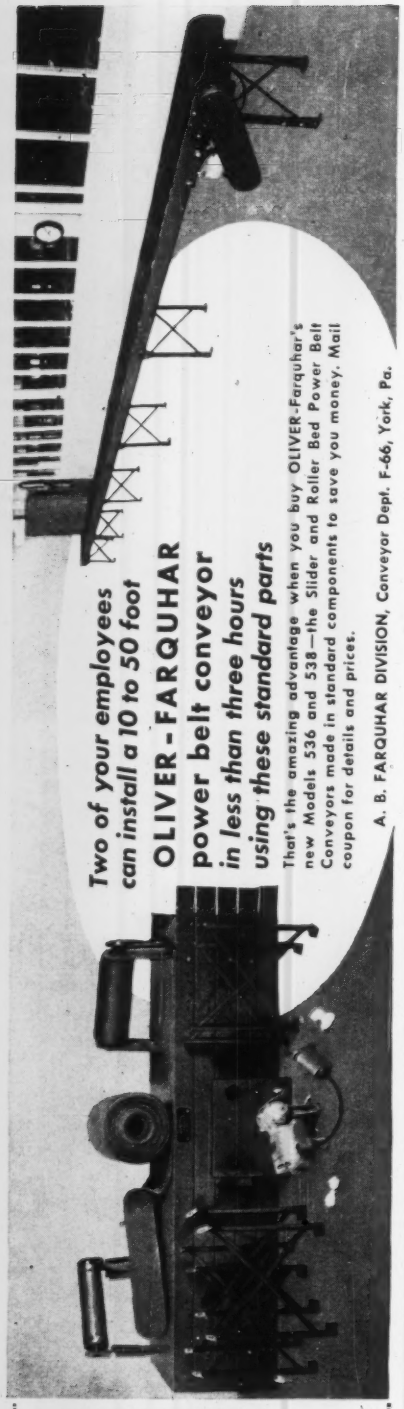
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There's more than a time factor to be considered in defining and determining the successful management of business.

Many elements of progress are neither statistical nor measurable in quantitative terms, but they are none the less real when the career of a company or a product or service is observed in retrospect. The intangibles, which are often counted under the heading of good will, flow from service to customers, management's relations with employees, company attitude in a community, and company standing within an industry. The casual remark from a customer, employee, or neighbor—"They're a nice outfit to do business with," "They're a good company to work for," "They really belong"—may be more expressive of progress at times than a profit-and-loss statement. Such comments testify to the loyalty and respect a company can earn when it exposes the character of management to the judgment of human values. Time itself helps to establish the level of the ethical and social standards of a concern. Reputations are built in the accumulation of evidence of individual actions, decisions, and performances.

The faith of a customer in the quality of a product or service is not won or tested in a day. It is the result of a continuing performance. Once the momentum is broken, it may be difficult to build up again, as can sometimes be seen when a company changes hands.

Every company needs the incentive of profits, and any executive team moves with a livelier gait under the whip of competition. There is no room for the lax or the leisurely today. New materials, tools, and techniques are constantly increasing the need for close observation of the items we produce, and the way we make, distribute, and service them. But neither do we have to maintain a frantic race with the clock or calendar, if our long-term policies are supported by pride of product, quality control, and the human touch among people—whether they are customers, employees, or just neighbors.

After all, we ought to take time to enjoy business. It pays off in pleasure, too.

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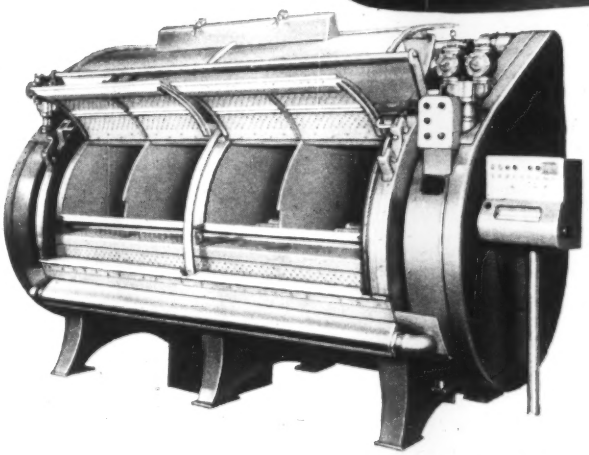

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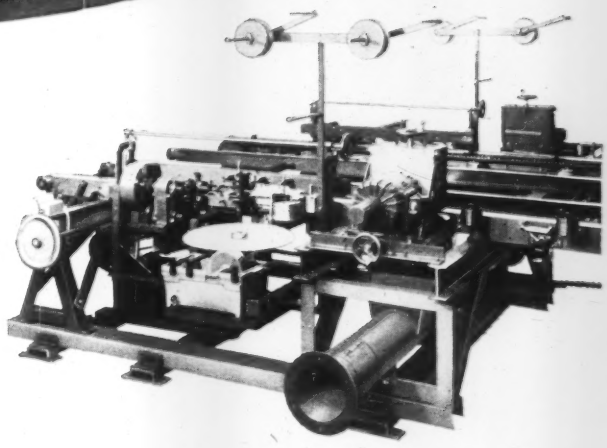

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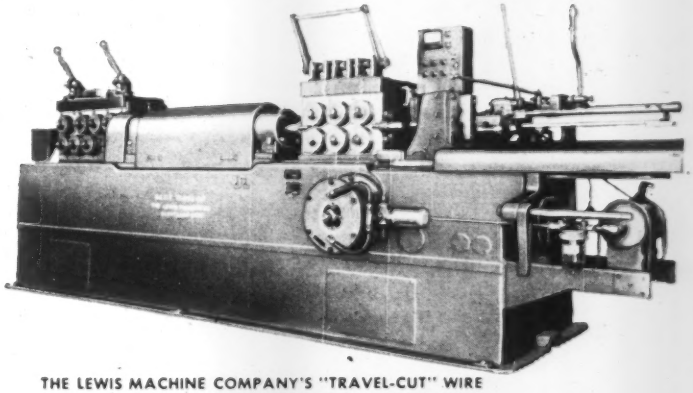

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Dr. Edward Goodrich Acheson's invention of colloidal graphite over 50 years ago has been followed by a constantly expanding program of fundamental research and product development. Today, with over 50 different dispersions already in use, three laboratory groups at Acheson are pressing toward perfection of whole new families of dispersions and their applications.

The custom dispersing of solids requires specialized facilities and production techniques. Why not take advantage of Acheson's 50 years of leadership in this field?

You will be interested in the number of different dispersed solids, in addition to graphite, that are being used successfully today in industry. Our Products List gives you, in quick-reading chart form, a résumé of Acheson 'dag'® brand dispersions and their typical applications. Send for your copy. Address Department DR-28.

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For Older Salesmen: Rehirement, not Retirement

ALSO: ***Multipacks Multiply Sales; Speeding Up Freight***

ALTHOUGH IT SEEMS likely that the effects of aging are more often a handicap to salesmen than to people in other occupations (DR&MI, July 1955, "Fewer Sales at Sixty"), some companies are putting older sellers to work. Skilled, aggressive salesmen in the preferred age brackets are still in short supply despite the widening pools of labor in other lines. And, feeling the competitive pinch, many companies—particularly those that use commission salesmen—are seeking to increase their sales forces in order to boost volume.

Gulton Industries, Inc., an electronics producer located in Metuchen, N.J., recently announced a program to employ 100 retired salesmen on a commission basis to sell its new product—a burglar alarm—to retail stores, plants, and homeowners.

Dr. Leslie K. Gulton, president of the company, says: "We decided to seek successful salesmen, 65 years or more, who can render useful service without the pressure of making their mark in the highly competitive markets because of their established sales techniques and proved successful careers. We hope to give many men who have had idleness forced upon them the chance to keep active."

Of course, the company's decision wasn't made out of unalloyed altruism. Says President Gulton, "It is not our intention fully to mass-produce our first consumer items until we have tested consumer demands and competitive tactics in the open market."

Gulton chose to achieve this through a part-time commission staff rather than through a full-time salaried force. Already about a score of older men have been taken on by the company. As yet, it is too early to judge results.

Another company has achieved highly successful results with what it calls senior salesmen—men past 60. The New York Wire Cloth Company ($8 million sales), York, Pa., hired scores of salesmen for a specific task: a six-month program of missionary sales work to introduce a new window screen to retail hardware and lumber dealers.

In answer to its classified advertisement (which said, "only candidates over 60 will be considered") the company received replies from teachers, bankers, and Ph.D.'s, as well as retired salesmen.

The sales of the new product have climbed steadily since its introduction, and the company asserts that when its next new product is introduced, senior salesmen will again do the job. The company says that the salesmen's many years of experience were helpful in determining sales policy for the new product. Adds a company vice president, "The caliber of men applying for the jobs certainly opened our eyes to the tremendous pool of top-notch manpower available for projects such as this."

Another company uses elder salesmen not merely for temporary programs but as an important part of its regular sales force. The Panther Company, Fort Worth, Texas, manufacturer of a roofing compound and other products, encourages applications from salesmen in their sixties. In fact, about 300 of the company's 2,800 salesmen are between 60 and 80 years old. The company has no mandatory retirement policy.

As A. B. Canning, Panther president, points out, the men must have

W. R. Southworth, 77, of Bremerton, Wash., chalks up another sale of roofing compound.

HOW TO CUT COSTS IN MULTI-ITEM DISTRIBUTION CENTERS

All too often, warehouses, stock rooms and other centers of distribution are regarded as the "step-children" of industry . . . bypassed by management and hamstrung by obsolete or inefficient handling techniques.

Today's trend to diversified lines is boosting distribution costs to an all-time high. To cut costs, production and marketing executives are re-examining their handling systems. They are making sure they are reaping the full profit potential of this diversification. Such studies may be performed by internal management teams, some of whom, unfortunately, tend to splurge on material handling equipment that pays off slowly — if it does the job at all.

Sound policy dictates *first* calling in a qualified methods engineer who specializes in multi-unit handling. His impartial analysis points to the most practical solution and the most sensible investment. His *scientific* procedure cuts costs and builds customer good-will by simplifying the handling of products despite their wide variety. In this way, competent consultants pay their way by actual savings in a year or less.

Perhaps you are considering a reappraisal of your handling operations. Bertrand Frank Associates, Inc., is well equipped to analyze the control, movement and storage of your materials or finished products.

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Management Consultants

Freight moves faster

The first "moving sidewalk" conveyer used by a common carrier speeds the handling of freight at the new Hoboken, N.J., terminal of Railway Express Company. It permits simultaneous unloading of rail express cars and trucks (left) and carries the traffic into the main conveyer line (rear center). Operating around the clock, it handles 600,000 pieces a month.

sales ability, business judgment, and a desire to remain active in their later years. He says, "This is not an endeavor to exploit manpower. Our training program is too thorough and expensive to waste on curiosity seekers. Many organizations feel that men over 45 are past their prime, but we think otherwise. Our salesmen are their own bosses and have no time clocks to punch. Hence a man in his sixties or seventies—who is, naturally, likely to tire sooner than a younger man—is at liberty to knock off any time he feels he is beginning to overdo it."

At 77, W. R. Southworth, Panther's salesman in Bremerton, Wash., is still going strong (see photo, p. 71). He joined Panther ten years ago after retiring from another company. Since then he has earned about $50,000. Why doesn't he get out of harness? Salesman Southworth says, "There's always just one more prospect ahead that I haven't yet closed."

Packages within packages

Packaging is moving into the spotlight increasingly these days as manufacturers seek ways to keep their sales high. And one of the hottest developments is now the package around a package—the multipack. Marketers of various products—food, soap, dog food, hardware, paints, film, cigars—are experimenting more and more with multipacks.

Adopted without careful planning and calculation, multiple packaging can boost costs considerably. But for the right product, in the right multipack, in the right outlets, it can also result in hefty gains in sales volume. For example, a Maine sardine packer found that by offering four cans in a multipack, sales were boosted 32 per cent.

A recent survey of 101 supermarket managers in the East revealed that 75 per cent preferred frozen fruit juice cans in a six-unit split-apart multipack which can be broken easily into two three-can packs. In this survey, conducted by the Container Corporation of America, the managers were given their choice of loose cans, six-can nonsplitting multipacks, and six-can split-apart packages.

Multipacks have been most successful in the marketing of beer in supermarkets; more than half of all packaged beer is now sold this way. But for some other products, such as canned vegetables and soups, they have had only mixed results.

Companies are finding that one of the important advantages of the multipack is the opportunity it offers to display an advertising message at the point of sale.

Multipacks should be increasingly important in the next few years, for they fit in nicely with the population shift to the suburbs, where housewives buy in larger quantities and stock their pantries more plentifully than they do in the cities.

—T.K.

The FIRST NATIONAL CITY BANK *of New York*

Head Office: 55 Wall Street, New York

78 Branches in Greater New York

71 Overseas Branches, Offices, and Affiliates

Statement of Condition as of December 31, 1957

ASSETS

Cash and Due from Banks	$1,899,087,995
United States Government Obligations	1,156,472,300
State and Municipal Securities	388,845,587
Other Securities	110,759,623
Loans	3,867,671,355
Customers' Acceptance Liability	122,334,561
Federal Reserve Bank Stock	18,600,000
International Banking Corporation	7,000,000
Bank Premises, Furniture and Equipment	40,847,145
Items in Transit with Branches	15,495,482
Other Assets	9,636,833
Total	$7,636,750,881

LIABILITIES

Deposits		$6,692,688,345
Liability on Acceptances and Bills		129,641,006
Due to Foreign Central Banks		6,292,900
Reserves:		
Unearned Income		32,873,784
Taxes and Accrued Expenses		64,675,406
Dividend		8,280,000
Capital (*12,000,000 Shares—$20 Par*)	$240,000,000	
Surplus	380,000,000	
Undivided Profits	82,299,440	
Shareholders' Equity		702,299,440
Total		$7,636,750,881

Figures of Overseas Branches are as of December 28.

$387,489,791 of United States Government Obligations and $7,795,200 of other assets are pledged to secure Public and Trust Deposits and for other purposes required or permitted by law.

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Affiliate of The First National City Bank of New York for separate administration of trust functions

CITY BANK FARMERS TRUST COMPANY

Head Office: 22 William Street, New York

Capital Funds $33,464,953

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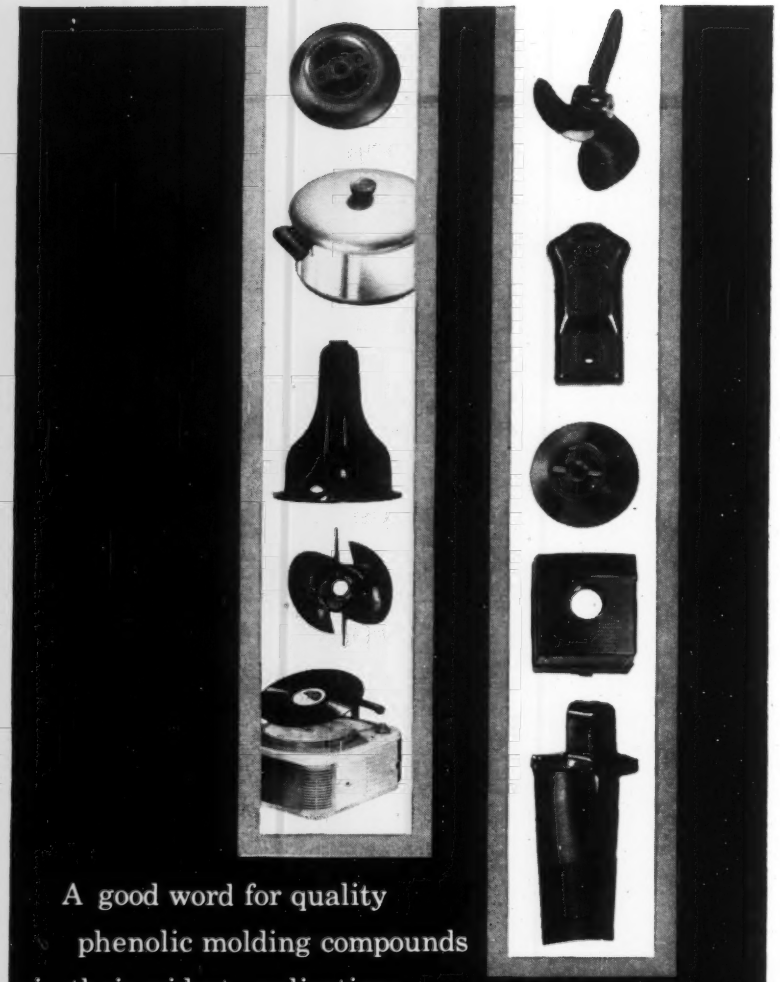

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phenolic molding compounds
in their widest applications
is PLENCO

. . . a good word, too, for dependable counsel. Whether you take our advice or not, you can't help but profit from your consultation with Plenco's problem-solving specialists. And, in production, you can't help but benefit from the wide-ranging knowledge with which these modern molding materials are formulated and the precision with which they are produced.

Does phenolics have the answer for you? Then, chances are that Plenco compounds, in their exceptional variety, versatility and quality-controlled uniformity, can provide it. We invite you to let us demonstrate that.

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FOR BETTER PLASTIC PRODUCTS

Serving the plastics industry in the manufacture of high grade phenolic molding compounds, industrial resins and coating resins.

PUSHBUTTON DECISIONS

continued from page 47

such intangibles as style and seasonal buying must also be involved in the final production decision. But the drudgery and delay in compiling data at Goodrich-Hood have been substantially reduced.

Similar data-processing equipment has been used by American Airlines since 1950. While their system is not at present a decision tool, it permits instantaneous inventory of booked and empty space on all flights. Savings can be achieved by optimum booking and flight scheduling. Similar equipment is in prospect to integrate reservations for the New York Central, New Haven, and Santa Fe railroads. As in most of the new applications, manufacturers and users prefer to think and speak of the immediate payoff rather than later uses.

Search for New Uses

But one large U.S. company is now at work on a vast experimental research program that is exploring computer uses and potentials from top to bottom. For the past two years, computers have been testing 70 applications a day to pinpoint potential payoff areas, train personnel, get experience, and win acceptance. This research is more extensive, costly, and basic than all but the largest U.S. companies can afford, but may lead to profitable new computer applications that will benefit many other companies.

Work like that being done by GE at Louisville and by Sylvania at its Data Processing Center in Camillus, N.Y., shows considerable promise for computers as operations research tools for management—with possibilities of broader applications in the future.

According to George E. Kimball, science adviser for Arthur D. Little, Inc., "Simulation technique is rapidly becoming one of the best tools for management decision purposes. We have simulated not only the operation of oil refineries, but also a number of different manufacturing operations and the operation of a fleet of trucks." One of the latest uses was developed by an oil company to solve a refinery-location problem. Broadly, the question was twofold: to decide whether a refinery should be discontinued or enlarged, and whether it could profitably serve

Getting the Facts

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Burroughs Sensimatic accounting machines are specifically engineered to provide you with a sweeping, consolidated picture of your true business condition. On receivables, for example. On production. On sales and inventory. Payroll. Disbursements. (To do so accurately, too—and *right now*.)

Have you ever been balked or misled by facts and figures that turned out to be history, not *news*? Then you know what we mean! And certainly you'll find the Burroughs Sensimatic—with its emphasis on Management Control—worth investigating. Just call our nearest branch office. Or write to Burroughs Division, Burroughs Corporation, Detroit 32, Michigan.

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For a pleasant and productive location that combines big city nearness with non-urban benefits—investigate ILLINOIS!

Illinois—your central location to serve all the nation

Division of Industrial Planning and Development, State of Illinois, Springfield, Ill., William G. Stratton, Governor.

a given area over the long term. All the known and many of the estimated factors (such as normal growth and accelerated metropolitan growth) were considered and introduced into computer model "worlds," with the result that four statistically optimal alternative solutions emerged, out of more than 200 possible answers. Each of the four then had to be evaluated against such intangible factors as the effect of layoffs if the refinery were closed to increase capacity. Summing up the general experience with simulation technique, Kimball reports: "It has been possible to see how plants of different sizes and different layouts will perform under a wide range of operating conditions. And in a number of cases, it has been possible to spot difficulties which might not otherwise have been foreseen."

This technique has also been used in freight-scheduling decisions, where such factors as arrival time, maximum load, and engine power help to determine the right equipment to carry the maximum load with the least waste to the destination.

According to Dr. Louis Robinson, manager of the Mathematics and Applications Department of IBM's Applied Science Division, industrial applications of simulation technique are sure to increase. He adds, "What we can look forward to is the marriage of scientific and mathematical methods with computer technology to bring to management data that have been analyzed with sufficient depth and intelligence to aid quick decisions based on scientific fact."

Rx for Schedule Headaches

At the moment, GE and IBM are working together on a simulation application of job shop scheduling. Still in the laboratory stage, the developments have resulted in considerable excitement. Various decisions, such as first-in first-out or biggest customer priority—two examples among many—can be tested by simulating what actually happens in terms of idle human time and machine downtime as the job moves through the shop. Ultimately, it should be capable of such applications as helping foremen decide what priority to assign a job to get it through the shop at the lowest cost in the fastest time.

Nobody who is now using computers suggests that they will ever displace thinking in decision making. But where decisions are based on data actually available in simple factual form, and where the answer depends on a selection of the alternatives based on complex and massive tables of data, the final decision may in some cases actually be machine-made. Some consultants call this computer use "table-searching." A simple instance might be the company that now bases industrial bids on an involved check of material,

Human decision in AMA's computer "world"

labor man-hours, licenses, patents, restrictions, transportation of raw materials, and various other quantitative factors. A West Coast aircraft manufacturer is actually now using a computer in determining which of several Government contracts to bid on (on the hypothesis that all could be won). Warehousing and inventory problems are other examples of the kinds of decision where factual data can be selected and analyzed to determine the right combination.

Not all decisions, of course, are reducible to selecting the best combination of accessible data. And quantitative solutions to problems skip completely human problems and a whole range of unpredictable, but possibly decisive, external events. As one consultant who advises brokerage houses on computer uses puts it: "You can't build a president's heart attack into a machine."

Right now, one computer manufacturer is working with a university on the possibility of designing a better economic forecasting tool. Tentative results to date have been favorable. Today, the typical economist must base his predictions on a few manageable key economic indicators. With a machine, a much larger and more complete set of indicators could presumably be fed in, with the probability of more accurate final guessing. The validity of

answers to questions ab

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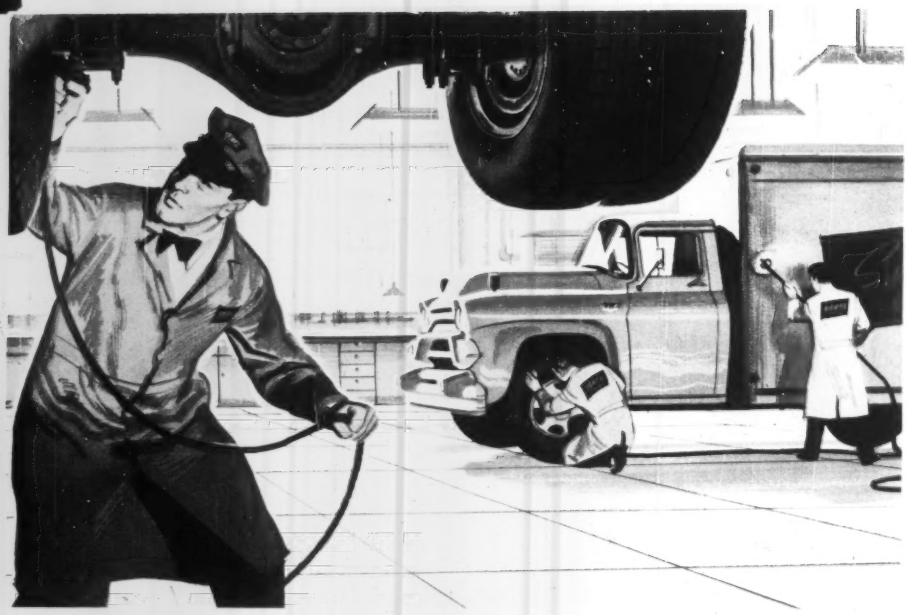

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the forecast experiments will, of course, have to be tested against what actually happens, until the most workable formulas and combination of indicators is determined.

Applications of this kind involve trying to design a model that reflects, as closely as possible, relevant conditions of the real world where human decisions must be made. Last Spring, the American Management Association introduced a decision training tool that permits five teams of human players to make human decisions that are tested in a "competitive market" pre-set in an electronic computer. Now dubbed a Simulation Exercise, it was originally called the Top Management Decision Game. Although AMA now says that this was a "misnomer," it is still called "the game" among those who have played it. AMA says the game has changed substantially since it was first shown to the press, but the later refinements have not altered its basic form as a decision training tool, designed to improve each player's ability to make decisions and to deepen his insights into the process.

How "The Game" Works

At the time of its public debut last May 2, 21 company presidents from various industries played the game publicly. The presidents were grouped in one five-man and four four-man teams or "companies" to compete against each other in a $22 million market with an imaginary and unidentified product. Each "company" had one fifth of the market, $10 million in assets, 1 million units of plant capacity, and $4.4 million in cash. Each was faced with a limited range of decisions, which included: increasing or cutting production, buying or selling plant capacity, investing in research and development, raising or cutting prices, buying certain information on competitors' activities (such as market share, total industry R&D expenditures). Each team's "moves" were fed into a computer which calculated the "consequences" from a model that simulated a real economic world, with hypotheses programed to reflect cause and effect among such factors as an expanding economy, price, and product research, among others. Missing from the model at that time, but since included, were penalties for running out of inventory and carrying inventory, and a more variable

FOSTER D. SNELL 38 YEARS OF SUCCESSFUL NEW PRODUCT RESEARCH AND DEVELOPMENT

How to keep your BRAINCHILD from being a BUST

Is your brainchild a development of a new product? A competitively-inspired improvement of an existing product? Or is it being unduly delayed in development because of lack of sufficiently skilled technical manpower? If the answer to any of these questions is "Yes," why not utilize the combined talents of Foster D. Snell's 150 experienced consulting chemists, chemical engineers, bacteriologists, toxicologists and market researchers?

It can prove a most economical and speedy answer to your problem. The size of your operation is no bar. In fact, we specialize in working with smaller companies.

Foster D. Snell makes it possible for you to obtain "Research Without Capital Investment," or expensing research out of current income, as you can use us as your complete source of research or as an extension of your own laboratory for a week, month, year or as long as required.

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38 years of diversified experience has resulted in Foster D. Snell being able to offer you the exceptional facilities of our laboratories and experienced talents of our staff to work on your brainchild. Our Product Development Departments include, among others, soap and synthetics, cosmetics and personal products, organic synthesis, fuels and lubricants, automotive specialties, protective coatings, waxes and polishes, inks, adhesives, chemical specialties, tobacco products, food products, textiles, pulp and paper, and packaging.

From this wide experience has come the basic facts which you should know prior to launching a new product development program, i.e.: a quick check of the market to determine the existence of a sufficient potential volume for the product, opinions of consumers as to preferences of your type of product and an assay of competitive products and practices. Such a survey can be made swiftly and economically by Foster D. Snell's Marketing and Economic Research Department. Your potential savings in stopping the development of your brainchild where there is no market, or a limited one, will more than pay for such a service. Should your product show potential, then we are qualified to aid in more exacting market and consumer acceptance studies, in studying process economies for determination of economical plant size, estimated costs and potential profit or loss.

Periodic Review of Present Successful Products also Necessary to Continued Success

Just because you've got the "best one on the market" today is no reason why someone isn't going to have a better one on the market tomorrow. So it behooves every manufacturer to have a periodic check made of his product, as well as those of his competitors, to make sure that his remains best. Time and again we have seen successful products beaten out by a competitor because the maker of the leading product grew complacent.

Keeping on top of the heap is a continuing effort.

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29 West 15 St., New York 11, N. Y.
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☐ My specific problem is.....
Please send me literature covering same.
Name.....
Title.....
Company.....
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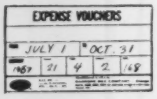

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market, with a built-in depression in one set of plays. Otherwise, what happened in May still is happening at Saranac Lake, N.Y., where the game is played at AMA's new Academy of Advanced Management.

The public game play was taken as seriously by the participating presidents as their own real day-to-day business. One team member, in the heat of the game—when he saw the "quarterly statement" that had just been turned out by the computer—shouted, "Wow! We really hooked them! We command the market!" "Let's don't be a pig," said a teammate. And a few minutes later another president on his team quipped, "Why don't the four of us quit our jobs and go into partnership?"

What They Learned

In the game post-mortem, the comments were lively. "This has been an afternoon that you need aspirin and doing decision making that will give you ulcers," said one president. A top railroad executive exclaimed, "I was in heaven. For a railroad man to sit with three other men and say, 'Let's raise prices!' Oh, what I could do to some of these commuters!"

Most players, then as now, agree that the game is exciting to play. What the player chiefly learns from it, they say, is this: To make a good competitive showing, a consistent long-term program, with clearly defined objectives, is necessary from the start. Some men say that they become more aware of the multiple factors involved in any decision, and realize better how dynamically any single choice, such as raising price, affects many others.

AMA's model has been criticized as unrealistic. Yet experience with the game has shown that the least effective players have been scientists who knew or played the model, and that the most effective players have been experienced business men.

Critics of the game, including men who participated in its original design or who are now working on future and more complicated models, feel that though it is "the best game since Monopoly," it may not be such a valuable source of decision-making experience as AMA claims. One critic calls it "puerile"; another wonders if the players wouldn't learn more if the model violated many of the common relationships of the real world—for example, if raising price improved your competitive position when others were lowering price. But another scientist says, "Sure, the game has value. It simulates a real world situation, with all the emotions, frustrations, and the excruciating time lag waiting for decision."

The Human Factor

In any case the problems that exist in the decision game are common to the practical management applications of computers, both those now in operation and others now being laboratory-tested. The electronic digital computer is, for all its complexity and speed, essentially a rigid device, programed by human assumptions to compute, classify, and interrelate data. The equipment is no better than the human thinking that programs the input, or the man who makes his decisions on what comes out. On a strictly factual decision, the machine may do the whole job, and it may help in the control of continuous routine applications. As one scientist on a computer manufacturer's staff points out, "The machine is least effective where intangibles impinge on decision, where the human factors are high."

But there is little doubt that, as training tools and information-gatherers and analyzers, computers will be increasingly used to do effective work in making decisions and in learning more about the decision-making process itself.

The wisest attitude for business to take toward computers probably lies somewhere between the first wild hopes and the current counter-reaction of disappointment. As business gains experience with computers, one by-product is becoming evident: the equipment forces companies to organize what they are doing and know the reasons why they are doing it.

So far, computers have proved most effective for companies that are already extremely well organized and managed, and they are helping less-organized managements to put their affairs in better order, even if these managements eventually reject the equipment as unsuited to their needs. In the sense that this advances their awareness of the requirements of good management, executives who are investigating the computer as a decision-making tool are themselves creating a business climate favorable to better management decisions. END

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The progressive New York Central System, famous for fast, efficient trains like the 20th Century Limited, has streamlined paperwork, too, with modern Bruning Copyflex copying machines.

In New York Central's accounting operations, many reports and statements are reproduced by Copyflex directly from original work sheets. Cumulative reports are prepared by posting new entries on work sheets and making new Copyflex copies. This has completely eliminated clerical rewriting, retyping, proofreading. Reports go out hours to days earlier.

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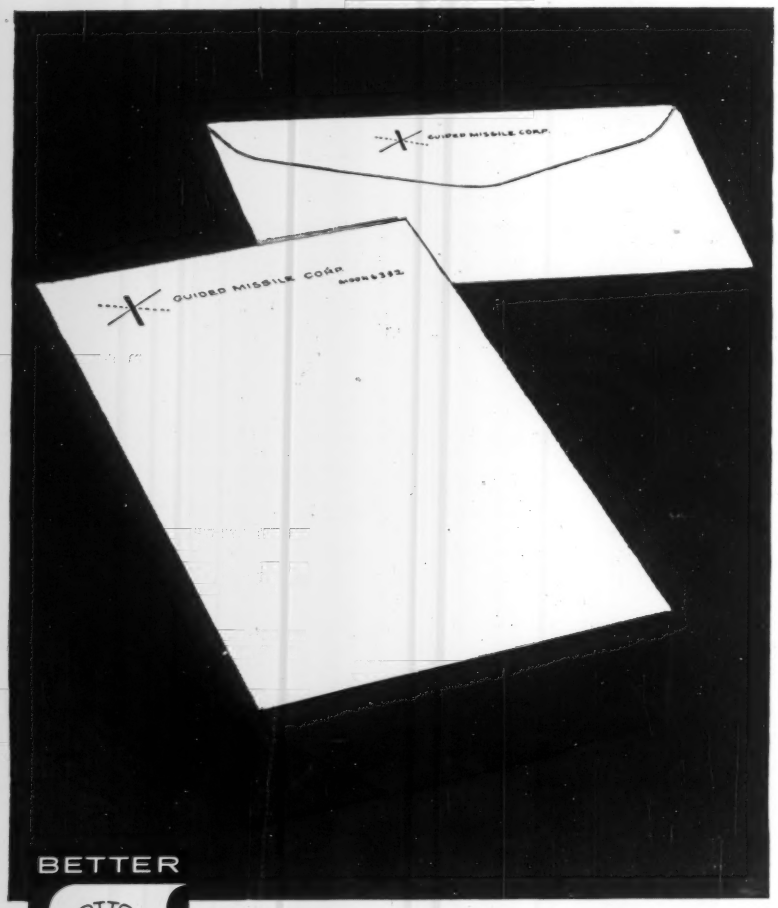

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In the office, you'll like the way it takes typing, writing and (when necessary) erasing. It serves admirably, too, for office forms and other applications that call for a clean, strong serviceable bond paper. And the cost? . . . hardly more, if any, than you are now paying.

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SUNDAY SELLING SPREADS

continued from page 40

houses, located in shopping centers and along the highway. Among them are Masters, Modell's, Times Square Stores, Bond Clothing Stores, and Rayco Auto Seat Cover Stores. In opposition are local citizens' groups seeking a quiet Sabbath and, according to the SMANJ, the big city department stores. The merchants' group insists that the real pressure to close on Sunday came not from the churches or the general public, but from the department stores. They point out that the ordinance banning Sunday selling went into effect a week after Stern's moved into the new Bergen Mall near the Sunday sellers.

The Suburban shopping centers have not generally joined the movement toward the seven-day week. Several large stores in these centers, particularly in the East, are outposts of big city department stores. Additional costs and possible labor difficulties discourage these retailers from Sunday selling.

In addition to the pending court action, other measures may affect seven-day selling in New Jersey. In the current session of the legislature, a state representative is introducing a bill with teeth and enough bite to close down Sunday sellers statewide.

Two Guys in Trouble

The department store vs. discount house hassle is more sharply outlined in the flare-up over Sunday selling in Allentown, Pa., and its suburbs. Several weeks ago Hess Brothers, largest department store in the city, threatened to open its doors on Sundays as an admitted maneuver to force local officials to take action against Sunday selling. The particular target was Two Guys from Harrison, Inc., which had opened a big discount store in the suburbs in October and was draining away business.

By threatening to remain open, the department store secured a promise from the district attorney to enforce effectively Pennsylvania's 163-year-old ban on Sunday selling. This involved fines of $4 on each of the Two Guys' more than 100 employees. Prior to this, fines had been levied only on the store owners. The state attorney general moved into the case as he sought an injunction

to prevent repeated Sunday openings. If the injunction is granted and then ignored, contempt of court citations will follow. The attorney general is also moving to force the Two Guys' discount house out of the state, entirely on the ground that it violated its charter by flouting state law.

This is the first time that such vigorous action has been taken in the history of the state's blue law. Since it happened, various associations of downtown retailers have been asking Hess to help them with their Sunday selling competitors.

Why do many consumers apparently approve of Sunday shopping?

Says Jack Haizen, vice president of Masters Inc., a large discount chain: "More and more fathers are participating in shopping. With the pressing need for careful budgeting, shopping is becoming an entire family affair. And the best day for the family to get together to plan and make their purchases is Sunday. The one-stop shopping center and the highway store have changed shopping from a chore into an outing, in which the entire family shares."

Other proponents of Sunday selling insist that Sunday laws are unconstitutional, that they violate the principle of the separation of church and state, that they are based on religious persecution, and that they are a restriction of personal freedom.

It's Profitable

But perhaps the most telling argument the Sunday sellers have is the crowds that trek through their stores on Sunday.

A spokesman for the SMANJ says: "There would be no Sunday selling if consumers did not patronize stores on Sunday. It is a direct response to the needs of the consumers and an integral part of the new leisurely suburban way of life. If stores were closed on Sunday, either many husbands and wives would be entirely prevented from shopping together or we would have so many people in the stores on Saturdays that no merchant would be able to give top service. Sunday selling would not be an issue if people did not want to shop and essentially it is an economic fight. In the Paramus controversy, the churches were inactive."

The attitude of local religious groups is, of course, important to retailers.

Says the vice president of a large

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IN MODERN CLEANING

TORNADO®
SERIES 300
QUIET TYPE
VACUUM CLEANER

This newly developed Tornado vacuum cleaner brings a new speed, efficiency and mobility into institutional and industrial cleaning.

Inside this compact internal filter machine, suction speeds up to 375 MPH are developed to assure one-stroke pickup.

What's more it picks up anything from dust to metal chips —water, suds or oil.

Move the Tornado 300 with ease on casters or use the carrier with 10" rear wheels and handle to negotiate stairs and uneven floors.

Whether you're cleaning from floor to ceiling in maintenance or using suction cleaning on the production line, you're in for a big, pleasant surprise when you see the Tornado 300 in action.

Want to see the Tornado 300 in action? Just drop a line and we'll send a Tornado cleaning engineer to demonstrate in your plant or place of business.

Write For Bulletin 879

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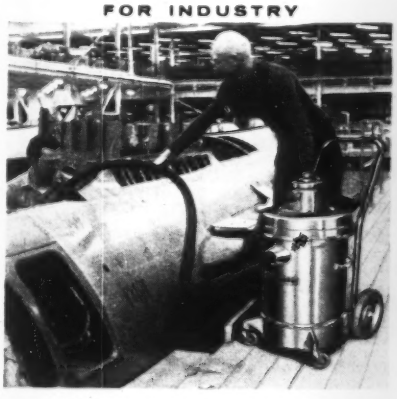

FOR INSTITUTIONS

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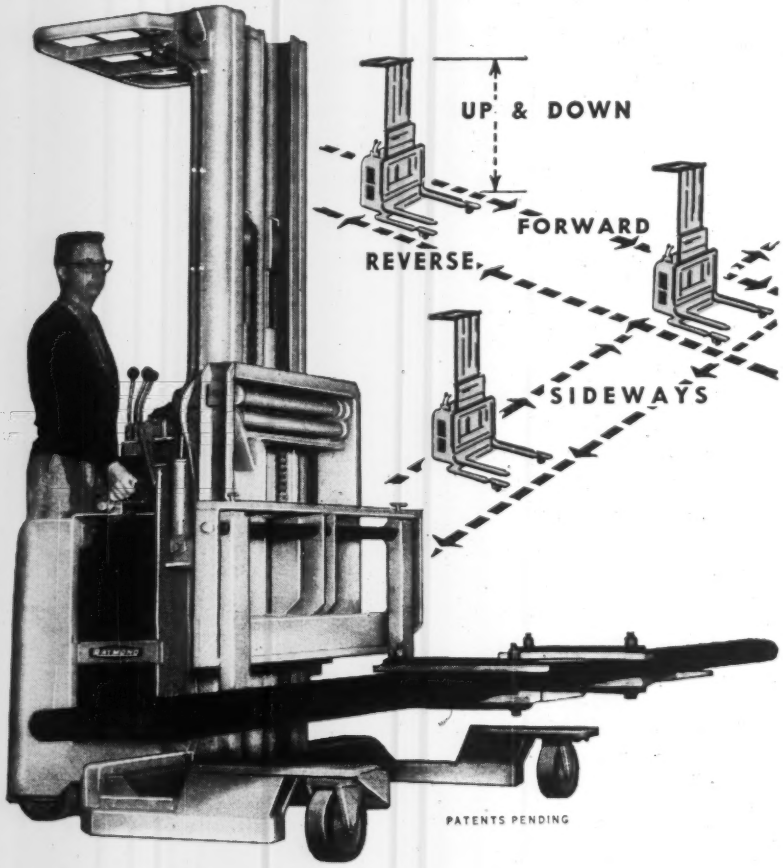
RAYMOND

4-D ELECTRIC TRUCK



move LONG material in NARROW aisles

Bar stock, rods, sheet steel, pipe, tubing, assemblies, carpeting, or any long material is easily handled by the Raymond 4-D Electric Truck . . . up or down . . . forwards . . . backwards . . . or sideways down a narrow aisle. You have to see it to believe it.

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4650 Madison St., Greene, N.Y.
Please send Bulletin describing your amazing 4-D Electric Truck

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chain: "We try to be open Sunday where we can, but it would be almost suicidal to our public relations to stir up unnecessary arguments with religious groups. A preacher is like your own boss—he never really loses an argument."

In order not to antagonize the churches, some retailers—particularly in the Western states—limit their Sunday selling hours from 1 to 6 P.M.

In Chicago, the president of a large automobile dealership—a faithful churchgoer, incidentally—says he doesn't want to give up his Sunday selling hours (which yield him 25 per cent of his weekly volume) because "to my way of thinking, it's no sin for me to stay open on Sunday. As long as the saloons are open, I don't see anything wrong with selling automobiles."

Although the seven-day selling week will probably spread further before it begins to decline, many observers feel that it's unlikely to become a permanent part of the American scene. As our leisure continues to grow, we, like past generations, should be able to spare a day for recharging our spiritual batteries.

END

EXTRA PROFITS—AT A PRICE

continued from page 40

There is a legitimate ground for television and newspaper advertising on Sunday. But the invitation to "come out and see us—all day Sunday" carries the suggestion that people have no other way to enjoy living except to buy, buy, buy.

Can we deny that the pursuit of business every day of the week encourages the growth of materialism? We talk about ideals, but we practice "conspicuous consumption." There is ground for believing that the business interests of a community owe more to their community than selling what people happen to want when they want to buy it.

Organized labor does not go along with Sunday work. In industry contracts call for premium pay on Sunday, and the result is a minimum of Sunday work.

But when an employer gives his employees adequate time off, he expects them to give a full measure of effort when they are working. Is it fair to the job, to the employer, to the group that arranges the con-

tract, for an employee to work on his time off? There seems little point to enlightened labor-management relations if labor takes the fruit of bargaining and creates its own sweatshop of a seven-day workweek.

Yet some people work Sundays as an extra job, usually because it seems necessary to make certain contributions to family welfare—perhaps the same examples of conspicuous consumption that others enjoy. These Sunday workers probably have no day to spend with their families.

And many people who have their own businesses and work on Sunday have no regular day off, no time that they can look forward to as a family day. Still other Sunday workers take their days off during the week. If they have children, the children are in school. So the Sunday worker loses his family day.

Community Relationships

Selling directly to local families is an important part of the commercial life of any community. Commercial life is important, but it is not the whole of community life, nor is it an isolated part. Direct sales to the consumer are related to wholesome family living, including that of the people involved in selling. It is also related to the spiritual and moral interests of the community.

Sunday selling won't ruin the churches, of course, and it is shortsighted of any churchman to maintain that it might. What might happen to spiritual interests is more subtly corrosive. The automobile dealer spends time Friday or Saturday evening inviting the whole family to come along on Sunday and buy that new car, or that first-class used car. Then, at the end of the commercial, he adds, "God bless you, and, on Sunday, go to the church of your choice." In other words, the seller is concerned about the spiritual welfare of the prospective customer—but only after he has made his "pitch."

Sunday selling apparently shows a profit on the ledgers of the stores. But the human balance sheet is not yet in. The real cause for concern lies there—in the cost of Sunday business to the man in business himself and to his family and to his employees and to their families. That cost is one the individual—and the community—cannot forever ignore with impunity. END

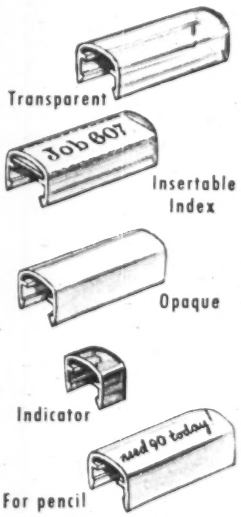
ALMOST UNLIMITED APPLICATIONS

ACME VISIBLE

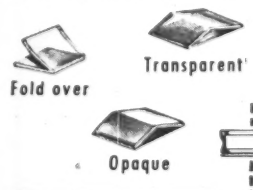
VISUAL CONTROL PANELS

Chart Action, Indicate Trends, Show Results, Permit Comparison, Picture Organized Facts for Analysis and Decisions.

OVER-RIDING SIGNALS



TUBE INTERIOR SIGNALS



Panels Contain 25, 50 or 100 Tubes Available in 17, 30, and 40 inch widths

Complete flexibility with limitless signalling and charting possibilities . . . Easily adapted to your individual record requirements.

Lightweight panels contain clear plastic tubes which are individually removable and may be shifted from one position to another . . . Clarity of tube provides full legibility of contents.

Signals snap on or off at any point . . . Hold position until positively moved . . . Slide smoothly back and forth . . . By-pass freely.

Insertable index feature affords triple signalling potential: by position, by color and by legend of index.

Ask the man from Acme to show you examples—

ACME VISIBLE RECORDS, INC. CROZET, VIRGINIA

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☐ Send us more information on Visual Control Panels.
☐ We are interested in Acme Visible equipment for _____ records.
KIND OF RECORD
☐ Have representative call. Date_____
Time_____
Company_____ Attention_____
Address_____
City_____ Zone_____ State_____

George M. Humphrey, Chairman of the Board and former Secretary of the Treasury, and Thomas E. Millsop, President and Chief Executive Officer, shown on a recent tour of National's operations.

The future is bright for steel—

the indispensable metal of modern living

In 1937 for every man, woman and child our steel industry produced 879 pounds of ingot steel; in 1947, 1,194 pounds; in 1957, more than 1,300 pounds! Every indicator points to continuance of this rising trend.

As our standard of living improves, as our population grows, the demands increase for more automobiles, more household appliances, more and better homes, more and more of the many other products that are identified with a better way of life.

And basic to all of these things—basic in fact to our whole economy and to our national defense—is STEEL!

For no other material does so many things so well for so little as does a ton of steel. Steel is truly America's great bargain metal!

Large and continued growth in our population during the years ahead is an accepted fact. And it is obvious that this ever-expanding population will need and demand what it takes to bring continued improvement in standards of living. So, regardless of short-term ups and downs, the long view can only be one of encouragement for America and the steel industry.

For many years, National Steel has been guided by firm confidence in our nation's future. Shortly after World War II, National began a continuing expansion program designed to keep ahead of the demand for steel. As a result, National today has an annual steel producing capacity of 6,800,000 ingot tons as compared with 4,500,000 ingot tons in 1946.

An over-optimistic outlook on our future? We don't think so. Although current conditions might suggest that the steel industry has outgrown the nation's ability to absorb its production, every bit of our steel-making capacity, and more, will be needed as our economy surges forward to greater growth and prosperity.

It has been National's consistent policy to be prepared today for tomorrow's progress. It will continue to do its part to supply the future needs for steel—the indispensable metal of modern living.

NATIONAL STEEL CORPORATION

GRANT BUILDING PITTSBURGH, PA.

OWNING AND OPERATING Great Lakes Steel Corporation • Weirton Steel Company • The Hanna Furnace Corporation
Stran-Steel Corporation • National Steel Products Company • Hanna Iron Ore Company • National Mines Corporation

OVERSEAS TRADE FAIRS BOOM FOREIGN SALES

ALEXANDER O. STANLEY

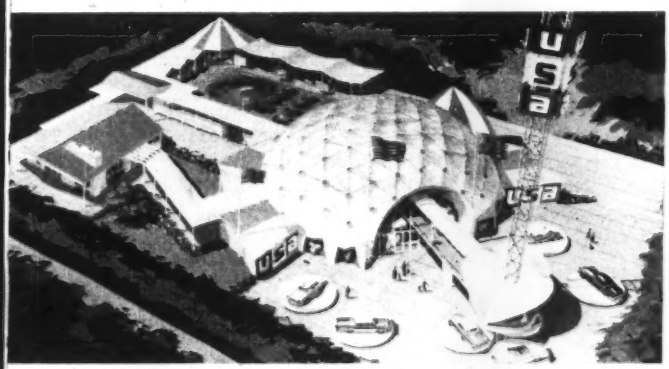
Though U.S. participation began as a good-will promotion gesture, plenty of companies have found out that dollars invested in overseas trade fair exhibits can bring in healthy sales dividends.

HOW WOULD YOU like to invest $15,000 and gross $250,000 in sales? That's the recent experience of one U.S. company, which decided to see for itself whether a market existed there for its laundry and dry-cleaning equipment. Learning casually about an upcoming Laundry Owners Fair to be held in Paris, the company reserved space, speedily assembled a modest exhibit, and completed plans for a team of three executives to pay a flying visit to France and study the prospects at close range.

This gamble for a new market paid off handsomely. Immediate sales were realized, and a distribution organization was developed from scratch to cover five key markets in Europe. The company's management was so impressed with the results of its new sales technique that it proceeded to exhibit at a second fair, this time in Frankfurt, Germany. Result: $325,000 in sales, more dealers. Today the company has made trade fair exhibiting a "must" in its overseas sales program.

Success story No. 2 involves a company that exports lubricants. Enjoying only fair success in penetrating the German market, the company decided to experiment with a trade fair in Hanover. The object was limited: to acquire prestige and, possibly, a few more dealers in Germany. The actual result: exclusive distributorships with companies in eighteen countries. In Germany alone, sales jumped almost 300 per cent over a two-year span. Less spectacular but still impressive gains were experienced in other countries. What started as a program to build prestige in a limited area ended by creating many new profitable markets. And this company now swears by the trade fair as a means of recruiting high-quality distributors and of accelerating trade penetration.

Of course, not all reports are so glowing. Some companies, for instance, are unhappy because their exhibits have encouraged foreign competitors to copy, with remarkable ingenuity, exclusive product features. And price schedules have been juggled up and down to hold a competitive edge or expand profit margins. Others complain that it is practically impossible to pinpoint results from fairs, leaving it an open question whether income balances outgo. And the rash of fairs—a popular and traditional way of doing business in Europe—makes selection



POLAND: The U.S. pavilion at the Poznan Fair, covering 12,000 square feet, is one of the world's largest prefabricated domes. Its plastic-coated nylon top, which glowed at night, was an eye-catcher.

AUSTRIA: Typical of the trade mission's reference library, this information center in the U.S. pavilion at the Vienna Fair attracted a constant flow of business visitors as well as students.

tough. With the hundreds of fairs scheduled, vertical (one industry) and horizontal (many industries) fairs competing for the exhibit dollar, and dealers squabbling for support in local shows, management has to tread warily in deciding when, where, and whether to plump down its display dollars. But despite all the headaches, the case for exhibiting in international fairs is strong and can, to some extent, be reinforced statistically.

Past Performance

Here are some interesting highlights of what has happened since the U.S. government decided, in 1954, to promote participation by industry in international fairs:

- More than 40 million people have seen the products of American industry in 55 officially (U.S.) supported fairs in 27 countries.
- More than 3,200 U.S. companies have contributed equipment, lent goods, or displayed materials in this assortment of fairs—and the list of participants is growing constantly.
- The 1957 Milan Fair (one of Europe's oldest and most famous) drew 680 U.S. industrial exhibits, or nearly twice as many as the previous year.
- Interest in fairs as a way of meeting the public and testing market acceptance of U.S. products overseas is gaining momentum. Once taken with the idea, U.S. companies have been exploring the byways of unsponsored fairs and fanning out to new areas in the hope of developing new markets.
- The spice of the U.S. exhibitions is variety. Top attraction at the Zagreb, Yugoslavia, fair was "Supermarket U.S.A." This completely stocked urban shopping center attracted more visitors (more than 1 million) than any other exhibit. In fair after fair during 1957, at least one major U.S. exhibit scored a smashing hit. In Tokyo it was color TV; in Bari, Italy, an operating peach-freezing line. A live poultry and animal show fascinated the multitudes in Saloniki. The *pièce de résistance* in Vienna was an extensive display of building and construction materials. At Poznan, Poland, a fully equipped one-family bungalow (cost: $26,000) stole the show. Do-it-yourself tools and workshop appealed mightily to the craft-conscious Swedes in Stockholm, as did an animated exhibit of two Navaho Indians hammering out silver ornaments and weaving colorful fabrics. In Kabul, Afghanistan, a team of four Americans directed unskilled Afghan labor in putting up the world's largest geodesic dome to house American exhibits. The dome and especially the speed of its assembly—two days—left the Afghans gaping. Agricultural machinery, cameras, chemical products, construction machinery, office equipment, outboard motors, atoms for power are only a few of the variety of products displayed by U.S. companies, both big and small.
- No data are available to spell out the dollar-and-cents results attained by this growing global program. But the fact that many U.S. companies are putting on repeat performances as well as exhibiting at more and more fairs and in a growing number of countries is supporting evidence that, in terms of hard economics, fairs do pay off.

Why do they pay off? People the world over enjoy going to fairs. They go to be entertained, and they leave impressed by the graphic and tangible proof they have seen of the rewards offered by the American way of life. Many are exposed for the first time to the multiplicity of gadgets and goods that we take for granted. On display at the Poznan Fair were 264 varieties of frozen foods. Frozen fish were fried on the spot in gleaming electric skillets and given to those who stopped to see and to sample. Foreign children ate our ice cream and bought soft drinks, candy, chewing gum, and other goodies from vending machines.

And the intricacies and conveniences of a modern kitchen installation made a much bigger impression on Syrian women flocking to the Damascus Fair than did the political mutterings in the press.

But indoctrination of potential customers is only part of the story of

U.S. TRADE FAIR SCHEDULE

The schedule lists only the fairs in which the U.S. government will be taking some part. It is not a complete list of all the international trade fairs that will be held abroad this year. For more information, write to the Office of International Trade Fairs, Department of Commerce, Washington 25, D.C.

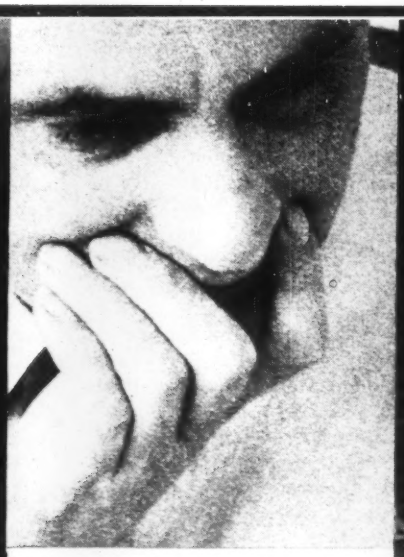
Spring 1958

Bombay	"Solo" Exhibit[1]	April 15–May 15
Lyon	International Trade Fair	April 12–21
Milan	35th International Samples Fair	April 12–27
Osaka	Japan International Fair	April 12–27
Casablanca	13th International Trade Fair	April 25–May 11
Hanover[2]	German Industries Fair	April 27–May 6
Paris[3]	46th International Trade Fair	May 10–26
Poznan	27th International Trade Fair	June 8–22

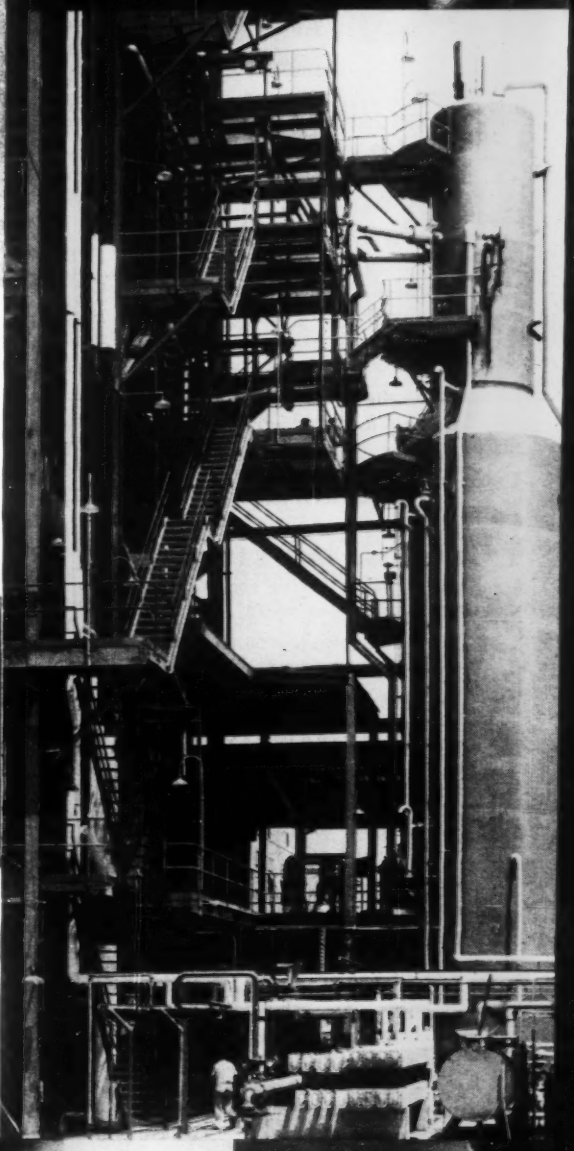
Fall 1958—Tentative Schedule

Izmir	26th International Trade Fair	August 20–September 20
Toronto[2]	Canadian National Exposition	August 22–September 6
Kabul	International Industrial Fair	August 23–29
Stockholm[3]	16th St. Erik's Fair	August 30–September 14
Saloniki	23rd International Trade Fair	September 7–28
Zagreb	International Trade Fair	September 6–21
Vienna	International Fall Fair	September 7–14
Berlin	German Industries Exhibition	September 13–28
Tunis	6th International Fair	October 18–November 2
Calcutta	"Solo" Exhibit[1]	November 15–December 15
Bogota[4]	International Trade Fair	November 22–December 8
Bangkok	Constitution Fair	December

[1] An innovation by the United States, the "solo" exhibit is designed primarily for use in India and will be an independent, traveling show, housed in a geodesic dome and featuring a display of small industrial plants and processes in operation.
[2] Trade Information Center only. All other fairs will have trade missions and centers.
[3] Office of International Trade Fairs will coordinate commercial exhibits of American electronic and chemical industries in U.S. Pavilion in lieu of official government exhibit.
[4] Coordinated industry exhibit *proposed*, subject to local arrangements.

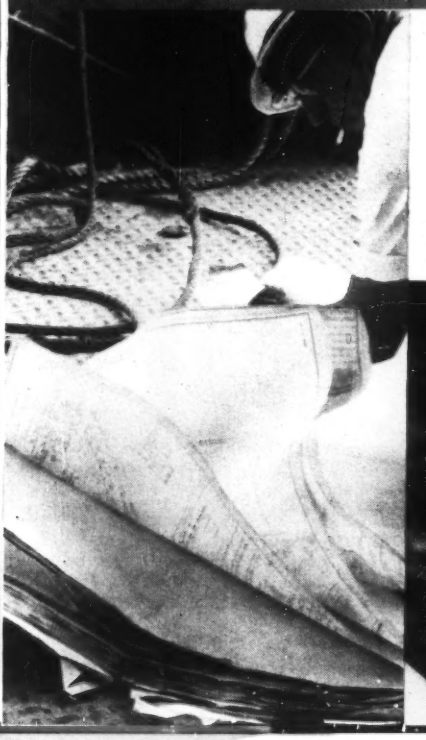


WHEN you consider expansion . . .
. . . the most important
investment you can make is in
the creative ability of men.



FLUOR

The Fluor Corporation, Ltd.
Engineers & Constructors
2500 S. Atlantic Blvd., Los Angeles



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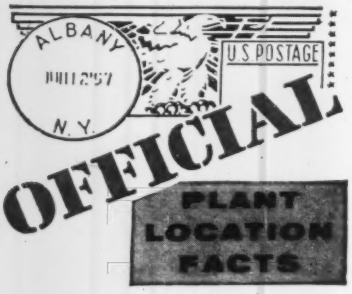
Completed 40 days ahead of schedule this new 60,000 KW steam electric unit at San Bernardino is producing profits for California Electric Power Company.



Accessibility to **major markets** in New York State

Greatest Market in the nation is New York State . . . and it is within *hours* of other foremost Seaboard and Central States markets . . . for every conceivable consumer and industrial product.

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Edward T. Dickinson

EDWARD T. DICKINSON
Commissioner of Commerce

international fairs. Of far more immediate consequence is exposure of local business men and industrialists to our new products. This pays off in contacts and contracts, which are, after all, the primary purpose of trade fairs. It is a rare and indifferent overseas management that does not send representatives to as many fairs as possible. At the fairs, overseas business men have a chance to exchange information, compare notes, and keep abreast of new products, improvements, and sales and service techniques. While design and product stealing and competitive pricing may result, these are accepted as the hazards of trade and are considered a small price for the advantages of being on public display.

New Techniques and Markets

For the U.S. exhibitor the fair not only acts as a selling medium, but can introduce him to new products and processes of local origin for sale in U.S. markets. And what better way is there of searching out facilities for producing U.S. products locally, under license or royalty agreement, and so bypassing restrictive import curbs? Figures are not traceable, but the frequent reports of license agreements that appear in trade papers and the swelling total of U.S. direct investments abroad (now estimated as high as $50 billion) reinforce the opinion that trade fairs contribute to good business as well as good will.

The practical aspects of the U.S. International Trade Fair Program so impressed our lawmakers that they have given program permanent status. The appropriation for the current fiscal year was a modest $3.65 million, but this outlay may be doubled in the next budget.

Profits Plus Good Will

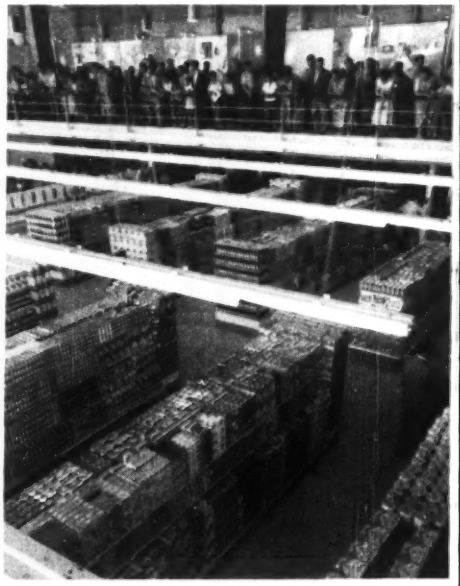
Actually, this is considered a "seed" program to encourage greater participation by U.S. companies. The money invested by U.S. industries is probably in the multimillion-dollar range. For example, the Zagreb pavilion, housing "Supermarket U.S.A.," was built at a cost of $235,000, and some $28,000 worth of equipment was sold off the floor when the exhibit was dismantled. The distribution of free samples must put a modest dent in some sales budgets. One exhibitor, for example, gave away 100,000 bags of popcorn at the Damascus Fair. While data on the money spent and the sales earned are only fragmentary, the isolated examples available clearly indicate that trade fairs are big business and require a big stake if we are to compete in world markets.

Initial U.S. participation was motivated by a desire to meet the propaganda challenge of Soviet exhibits, but now it is profits more than political benefits that inspire interest on the part of U.S. business.

To reinforce its plan for promoting interest in international fairs, the U.S. Department of Commerce wisely developed the trade mission program, designed primarily to preview the markets by sending over compact teams of U.S. business and government specialists in advance of scheduled fair dates. On the business side, top-flight U.S. executives (who serve without government pay and receive only transportation and a modest per diem) are selected by the Department of Commerce to serve as an impartial information panel. They act as traveling consultants to explain and explore the trade possibilities for the industry they represent, not their own companies.

Boning Up

A typical mission team consists of three to five private business men with specialized knowledge in the



YUGOSLAVIA: "Supermarket U.S.A." at the Zagreb Fair had sightseers stacked, like the food displays, balcony high. Products of 600 U.S. food companies were exhibited here.

At The Ford Motor Company's Cleveland Engine Plant No. 1

AMERICAN BROACH & MACHINE DIVISION
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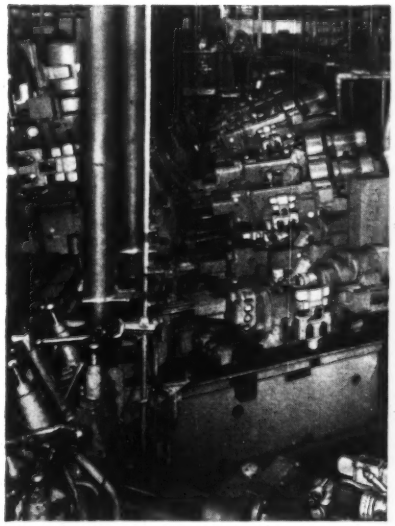

Typical transfer line installation shows ample use of Vickers hydraulics for actuation and control of automated operations.

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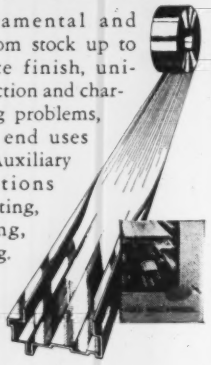

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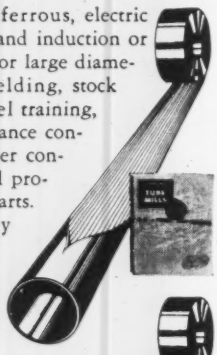

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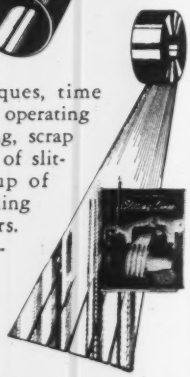

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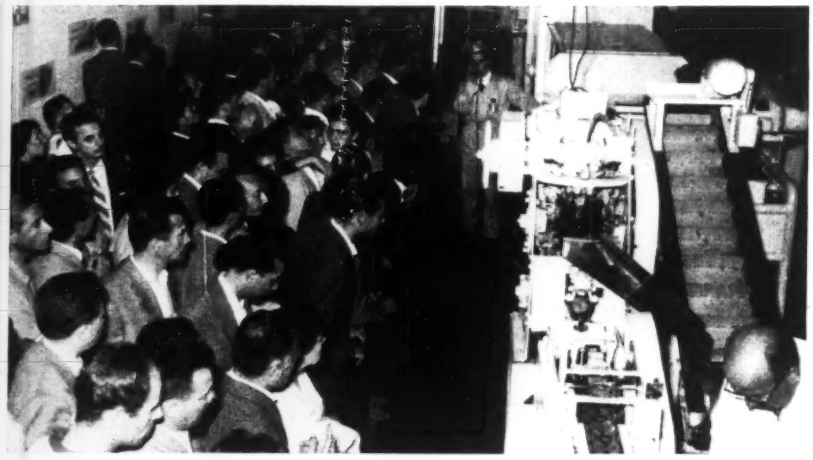

ITALY: No. 1 on the fair parade at Bari was this working exhibit of food-processing machinery, which was used to demonstrate how to prepare Italian peaches for commercial freezing.

industry or industries to be featured at the particular fair, accompanied by a Department of Commerce specialist. This group visits the overseas market for which a fair is programed, spending a period of six weeks or more on tour, depending on the size and complexity of the market. The normal routine follows three stages:

1. The team members are brought to Washington for intensive briefing on the operations, policies, and objectives of the individual mission. Discussions are carried on with members of the Bureau of Foreign Commerce staff as well as with other government officials who are well posted on the host country and can give practical guidance and counsel on the market. Former team members also partieipate. Finally, manuals containing reference data and instructions are supplied. This careful planning leaves little to chance and prepares each team member to function confidently and smoothly.

2. Shipped ahead of the mission is an extensive commercial library for on-the-spot reference. Each library, supplied gratis by U.S. publishers, consists of more than 1,100 trade and business directories, statistical and marketing reports, trade journals, and other commercial publications. This wealth of reference material makes it possible for each team to get hold of needed facts quickly and to assist local business men who seek information. The libraries are subsequently housed on the fair grounds and are open to visitors. When the fair closes, the material is donated either to Foreign Service libraries or to interested local chambers of commerce.

3. Well coached, the mission goes into high gear once it arrives on location. Operating on a tight schedule, the U.S. group talks with local business and government executives in groups and individually. On a typical tour, as many as 5,000 and rarely fewer than 1,000 local business men are contacted. The exchange of ideas and information follows a give-and-take pattern. And it is not surprising to find that some who come to sell their products wind up buying. Since the tour is planned to include as many key cities as possible, the mission member sees the market in depth and understands the productive strength, potential, and limitations of each segment of the country under study.

A Look at the Record

This sound and methodical approach has paid big dividends in immediate and future trade prospects, let alone international good will for the U.S. business community. Some idea of the vast scale of the mission program can be gained from these capsule statistics:

- In slightly more than three years a total of 59 teams has previewed 56 international trade fairs in 37 countries.
- Every important country in Western Europe (and even one behind the Iron Curtain—Poland), in the Middle East, and in the Far East (except the countries behind the Bamboo Curtain), as well as several

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SPECIAL REPORTS ON FINISHING NON-FERROUS METALS

NUMBER III—Lustrous, Corrosion-Resistant Finishing with Chemical Polishing Iridite

WHAT IS IRIDITE®?

Briefly, Iridite is the tradename for a specialized line of chromate conversion finishes. They are generally applied by dip, some by brush or spray, at or near room temperature, with automatic equipment or manual finishing facilities. During application, a chemical reaction occurs that produces a thin (.00002" max.) gel-like, complex chromate film of a non-porous nature on the surface of the metal. This film is an integral part of the metal itself, thus cannot flake, chip or peel. No special equipment, exhaust systems or specially trained personnel are required.

Chromate conversion coatings are widely accepted throughout industry as an economical means of providing corrosion protection, a good base for paint and decorative finishes for non-ferrous metals. Certain of these coatings also possess chemical polishing abilities that have luster-producing, as well as corrosion-inhibiting, effects on zinc and cadmium plate, zinc die castings and copper alloys. However, continued developments in this field have been so rapid that many manufacturers may not be completely aware of the breadth of application of this type of finish. Hence, this discussion of the many ways in which this chemical polishing characteristic can be used in final finishing or pre-plating treatments to produce a lustrous appearance with distinct display and sales appeal and appreciable savings in cost. Report I on decorative, corrosion-resistant finishes and Report II on paint base corrosion-resistant finishes are available on request.

The degree of luster possible on a surface is a function of the degree to which the surface can be smoothed. Leveling to provide a smooth surface can be achieved by mechanical or chemical means, or a combination of these, depending upon the luster desired and the original condition of the metal. Chemical polishing effectively imparts luster otherwise difficult and costly to obtain. For this reason, it is often used to supplement or entirely replace mechanical polishing, depending upon the application and the original condition of the metal. Chemical polishing has the additional advantage of providing overall treatment of the submerged part. It reaches into even the deepest corners and recesses that are otherwise inaccessible. Certain of the Iridites are specifically designed to perform this chemical polishing operation. Also, they provide corrosion protection as do all Iridites, thus may be used as a final finish or a pre-plating polish.

If Iridite is to be used as a final finish, in contrast to pre-plating treatment, the chromate conversion coating generated is allowed to remain, providing good corrosion resistance. Color inherent in these Iridite films ranges from a yellow cast to yellow iridescent. These coatings may be used without further treatment where this color is acceptable and good corrosion resistance is desired. Further, these basic coatings can be tinted by dyeing. Among the dye tints available are shades of red, yellow, blue and green. If desirable, the basic coatings can also be modified by a bleach dip leaving a clear bright or blue iridescent finish. In all cases bleaching reduces corrosion resistance.

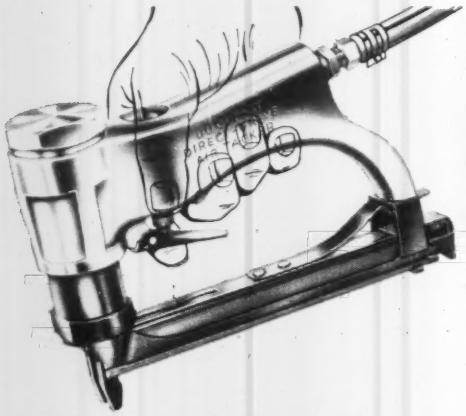
As examples of this type of final finishing, Iridites #4-73 and #4-75 (Cast-Zinc-Brite) make possible for the first time, lustrous chemical polishing of the as-cast surface of zinc die castings. Thus, in many cases, sizeable savings in finishing cost are realized by elimination of plating costs. This economical method can be used on tools, appliance parts, toy pistols, locks and many other small castings. Another example is the treatment of copper and brass parts, such as welding tips, to eliminate buffing and provide additional corrosion resistance. In many cases, handling costs are reduced appreciably by replacing piece-part handling with bulk processing. Still another example of the use of this chemical polishing and protective quality of Iridite is a simple system of zinc plate, Iridite and clear lacquer instead of more costly electroplated finishes. Typical of this type of lustrous finish are builders hardware and wire goods.

As a pre-plating treatment, in contrast to final finishes, Iridite can be used to chemically polish zinc die castings or copper prior to plating. In such cases, Iridite should be applied as an in-process step, so that the protective film is removed before the plating cycle. The savings in handling, material and labor costs are obvious. This process has made it practical to plate chrome directly over copper on steel, conserving nickel, yet producing a lustrous chrome finish. Used after stripping faulty plate in reprocessing zinc die castings, Iridite restores luster to the casting, thus making possible replating without blistering.

Other Iridite finishes are available to produce maximum corrosion resistance, a wide variety of decorative finishes and excellent bases for paint on all commercial forms of the more commonly used non-ferrous metals. As a final finish, appearance ranges from clear bright to olive drab and brown and many films can be bleached or dyed. As a paint base Iridite provides excellent initial and retentive paint adhesion and a self-healing property which protects bare metal if exposed by scratching. Iridites have low electrical resistance. Some can be soldered and welded. The Iridite film itself does not affect the dimensional stability of close tolerance parts.

Iridites are widely approved under both Armed Services and industrial specifications because of their top performance, low cost and savings of materials and equipment.

You can see then, that with the many factors to be considered, selection of the Iridite best suited to your product demands the services of a specialist. That's why Allied maintains a staff of competent Field Engineers—to help you select the Iridite to make your installation most efficient in improving the quality of your product. You'll find your Allied Field Engineer listed under "Plating Supplies" in your classified telephone book. Or, write direct and tell us your problem. Complete literature and data, as well as sample part processing, is available. Allied Research Products, Inc., 4004-06 East Monument Street, Baltimore 5, Maryland.



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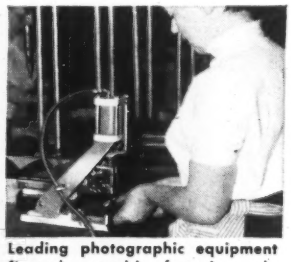

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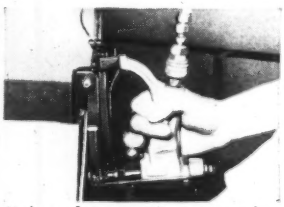

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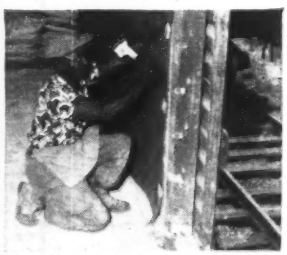

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countries in Latin America, have been on the itinerary of mission program representatives.

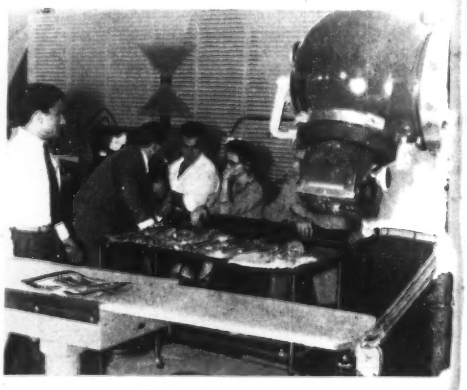
- Mission groups have visited 490 cities and conferred individually or collectively with a quarter of a million overseas business people.
- More than 200,000 inquiries, involving imports, exports, and agency and licensing agreements, have resulted from the program.
- Ten countries in which no fairs are programed were added to the mission schedule for 1958, a sensible extension of this program for profits.

Successful Missions

Authorities on international trade and investments, department store executives, experts in the fields of design, packaging, advertising, transportation, and market research, executives of trade associations, and members of the press who have worked on these teams consider the mission program one of the most powerful weapons available in the immediate and future fight for world markets.

So if you are looking for a fresh slant on how to snap your sales out of the doldrums, consider the international trade fair. At the least, it can win your company new prestige. And it may be your key to bigger and better overseas markets. END

NOTE: For extensive files of information and a detailed portfolio on the international trade fairs in action, grateful acknowledgment is made to Harrison T. McClung, director, Office of International Trade Fairs; Elizabeth S. Colclough, staff member; Frank Elkins, chief, Public Information Division; and E. Paul Hawk, director, Trade Missions Division. All function within the U.S. Department of Commerce.



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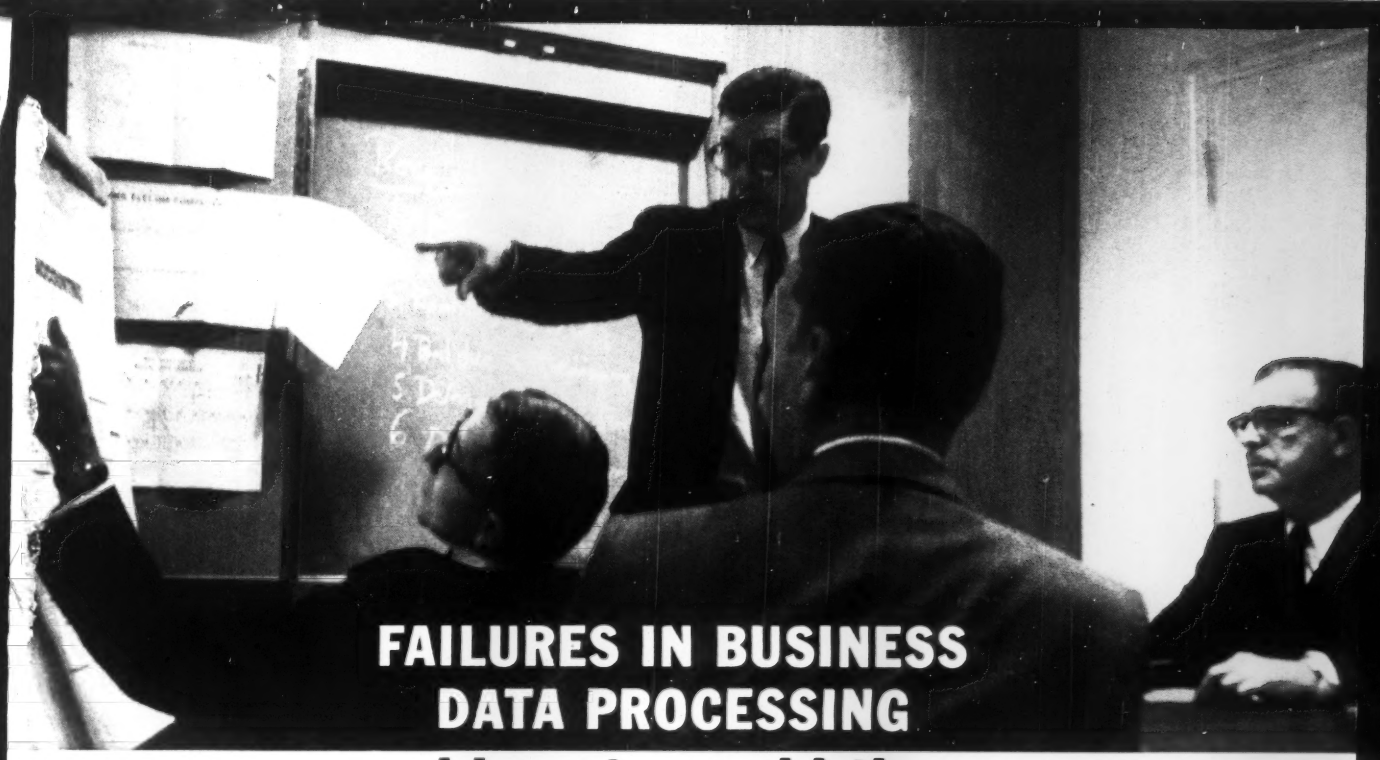

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Los Angeles	March 24-28	Boston	May 19-23
New York	March 31-April 4	Buffalo	June 2-6
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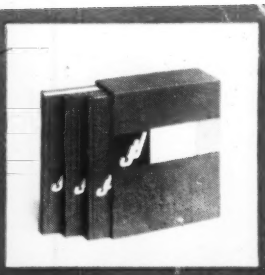

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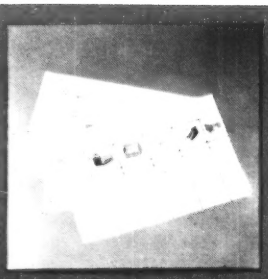

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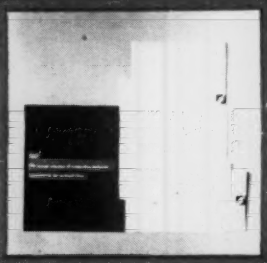

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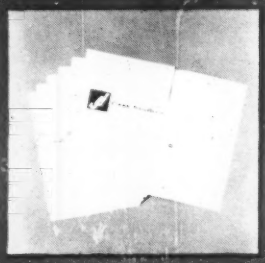

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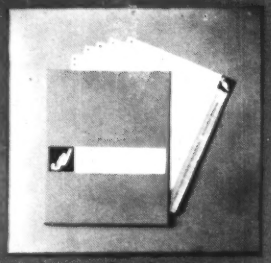

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continued from page 43

company. In the chemical company, he provides a highly developed system of accounting for capital assets, with special reference to capital additions, replacements, and improvements. He implements facilities planning by painstaking analyses of the costs of continued maintenance of equipment, as compared with costs of replacing equipment. But in the dress-manufacturing company he attaches much less importance to accounting for capital assets. And he handles accounting for maintenance in terms of current control of a variable cost, rather than in terms of long-range planning of fixed commitments.

He also builds the expense detail of the accounting system differently in the different companies. Accounting for process labor in the chemical plants may be limited to one or two expense accounts—for instance, simply "process labor" and "payroll added costs." However, in the dress plant there may be voluminous reports, dealing with incentive wage payments, performance of individual operators, and analyses for each pay period of the cost-and-profit effects of wage differentials, overtime premiums, shift premiums, and the like.

Value of Discrimination

Or take the question of the relative accuracy of accounting. In some cases, precision makes a lot of sense. A decimal-point saving in material costs in a mass-production metal-products industry can add up to an impressive amount and is worth a lot of accounting effort. Obviously, here is one place where the nonelectronic controller provides precision. On the other hand, he takes a different attitude in a chemical-process industry, where an across-the-board increase in wage rates of 10 cents an hour (even though amounting to a substantial number of dollars) is a relatively minor consideration. In one case, it pays off in profits to have careful, precise, and detailed cost records. In the other case, there is no such pay-off. The nonelectronic controller displays his judgment by accounting for transactions up to, but not beyond, the payoff point.

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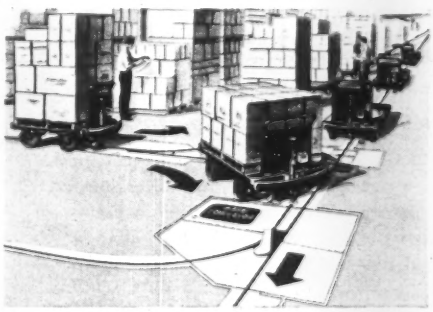

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management planning, and providing information effectively and economically), the fourth element, proper organization of the nonelectronic controller's own department, plays an important part.

Looking at the fifteen companies where our fifteen model nonelectronic controllers work, we see what appears to be a bewildering assortment of plans of organization. But a second look shows that the differences are not so great as they seem. In each company three major functions can be identified (although all three are not always within the controller's department). These are finance management, accounting for legal and tax purposes, and managerial accounting.

A Three-Pronged Function

In general, finance management involves planning for the monetary needs of the company and obtaining and safeguarding funds. It requires handling relationships with existing and potential company creditors, debtors, and investors.

Accounting for legal and tax purposes includes record-keeping and analytical activities necessary for the company to meet all financial, tax, and legal requirements. These activities may range from issuing routine statements of what the company owes to other people and what other people owe to the company to the analysis of very complex problems of the proper treatment of capital and expense expenditures in the light of legal and tax requirements. Internal audit and preparing reports for outside financial institutions and governmental agencies are often included in this function.

Managerial accounting serves management's planning and control purposes by providing management with interpreted facts and figures. These are for use in preparing and appraising operating plans, analyzing opportunities for capital investment, and measuring performance against plan. This function also includes the issuance and interpretation of almost all forecasts and regular operating statements. In addition, almost all the controller's special studies serve planning and control purposes.

Ideally, the nonelectronic controller organizes to carry out these responsibilities by, first, calling himself a vice-president-finance and then

appointing a treasurer and a controller reporting to him. The treasurer handles finance management; the controller handles both accounting functions.

Some controllers organize to carry out these major functions by appointing two assistant controllers. One assistant is responsible for all managerial accounting, including the maintenance of standard cost information, preparation of forecasts and budgets, issuance of control reports, variance analysis, conduct of special studies, and so forth. He may also have the methods and procedures responsibility. The other assistant is the legal and tax accounting manager, responsible for general accounting and all related ledger accounting. He sees that company records are kept in compliance with company policies. He is generally the one who worries about tax impacts, legal matters, and conformance with corporate policy. He often supervises the clerical services.

There are, of course, many possible—and quite legitimate—variations. In some cases, the tax man reports directly to the chief financial officer. Again, matters of tax and legal compliance may be administered by a corporate secretary. The treasurer and the controller may report independently to the president.

The really significant conclusion is that variations in plans or organization do not seem to have handicapped the well-being of any of the fifteen companies involved, nor have they prevented any of the fifteen men who make up the composite nonelectronic controller from developing top-management stature.

Perhaps the secret of the nonelectronic controller's success lies not so much in formal organization as in the fifth ability that he displays—namely, the skilful administration of working relationships.

Interdepartmental Synthesis

Although some of these working relationships are challenging in terms of their variety and complexity, others are relatively uncomplicated. For instance, as financial manager, the nonelectronic controller operates with authority to safeguard the company's cash and other assets. There is usually little misunderstanding about the responsibilities of this job.

However, other areas of the controller's job present problems, as do

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the three aspects of his job as accounting manager.

The first aspect has to do with corporate accounting practices. Here, the controller's authority, as a practical matter, to demand compliance with legal and tax requirements is generally recognized. In organization theory, of course, only line executives can require compliance. However, the controller is recognized as possessing the authority of knowledge and functional supervision over legal and tax accounting matters. For example, even if plant and divisional accountants report to their respective general managers, they also take instructions directly from the controller at headquarters on keeping records. This is the only practical way in which corporate financial and accounting policy can be implemented.

A second aspect of the job is that of supplying clerical services. This is a purely staff function. A man providing tabulating service, for example, is in no position to determine what figures should be reported. Rather, his job is to furnish, within the limits of his schedules and equipment, whatever information has been specified by the user. Many aspects of the controller's job involve paperwork services. It is often a matter of fine judgment to know to what degree the controller should specify the format and content of those services.

The Test Area

In the third area, that of managerial accounting for planning and control purposes, the controller has no authority to require compliance. But even so, he should not provide a merely mechanical service. Rather, he should participate, on a give-and-take basis, with other executives in the analysis and solution of company problems.

It is in this area of planning and control that the controller earns or fails to earn his status as a member of top management. This does not deny the importance of his other functions. On the contrary, to take a single example, tax considerations have meant literally millions of dollars to some companies. Top management is extremely interested in taxes.

However, there is this basic distinction: Taxation is looked upon as a subject calling for special skills of a high order. Almost all presidents

and vice presidents will immediately admit that they are not good tax men. But planning and control activities do not depend on an abstruse knowledge comparable to tax know-how. Everyone can plan—or thinks he can plan.

This means that working relationships in the planning and control area are quite different from those in other areas. In planning and control, there is no substitute for the personal touch. Sending papers and reports back and forth in the house mail won't do the job.

Each of the fifteen men has shown a flair for conducting himself, and teaching his subordinates how to conduct themselves, in ways that reflect credit on him (and them) in dealing with company management. For instance, in some companies, someone from the accounting department delivers reports in person, goes over the main points with the executive, and encourages him to ask questions or make comments. In one company, meetings of executives are regularly scheduled when major operating reports are issued. The controller and his subordinates attend these meetings (several are held simultaneously). This allows for free interplay of questions and answers. It insures that the reports will be seen in perspective. It brings to light any plans that may change the operating results on future reports.

Strengthening the Links

In several cases, the nonelectronic controller's administration of working relationships has been aided by an over-all company program. Personal relationships in these companies begin with executive development programs, which include giving newly employed young men on-the-job training for larger responsibilities. The accounting department is always a necessary port of call, so that over the years alumni of the accounting department are found in various management jobs in other areas of the business. These alumni understand how to work with the controller and the controller's job is made easier.

In one company, the job of improving working relationships begins within the finance and accounting area. Mature accounting executives are instructed to swap jobs every now and then. A plant controller will change places with the

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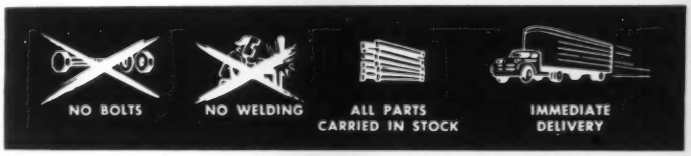

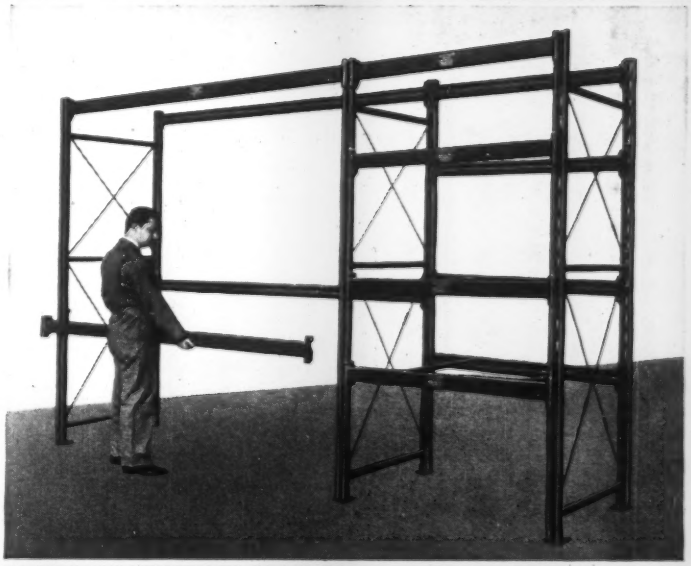

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methods-and-procedures supervisor at headquarters for a 60- or 90-day period. The headquarters staff man gets to see first-hand the kind of information that the plant manager is requesting, and the plant controller gets to see first-hand the consistency and uniformity of accounting treatment required at headquarters.

Liaison Teams

In another company, close personal relationships with operating people are established and maintained by the use of project teams. This particular concern works on both engineering and production contracts for the Government and for private industry. When a contract is in the early talking stages, three men are assigned to the project team—a design engineer, who represents the engineering function; a process engineer, who represents the manufacturing function; and a cost engineer, who represents the accounting function. These three men, as a team, actually carry the planning and control responsibility for the entire project, from initial cost estimates to the final shipment of the products. The team works as a sort of liaison management between the division general manager and the line operating executives involved on the job.

Top-management contacts are strengthened in some companies when the controller is a member of the board, because he is exposed to the forward thinking at the board and top-executive levels. In this way, he is able to gage the relative importance that management is attaching to different problems. This in turn means that he can plan the amount of effort his people should spend in analysis of such problems.

Use of the variance-analysis team is still another way to cross departmental lines. Such a team—which might include, for example, an accountant, an industrial engineer, and the assistant plant manager—might analyze the variances between actual and standard and prepare a report to the plant manager explaining the variances, stating whether they are likely to continue, and possibly suggesting corrective action.

As a final aid to working relationships, the nonelectronic controller tries to keep routine reports to a minimum and to emphasize special projects. This may sound like planning work loads rather than planning

working relationships. But if a controller and his staff are snowed under by routine reports, they cannot be very cooperative when asked for special studies or additional information. However, if routine reports require only part of the staff's manpower, then the controller is ready to work on special information also.

Probably no other single point has had so much impact upon the reputations of these fifteen men as being able to come up with special information when requested. The controller who cannot get around to performing special studies will, over a period of time, develop a reputation for being hard to get along with. On the other hand, the nonelectronic controller turns out special studies with dispatch and is held in higher regard by his associates.

The Plus Factor

In addition to all these special abilities, the nonelectronic controller brings to his job a sense of proportion. He maintains his perspective on the value of cost information in relation to information and opinions about markets, technical know-how, competitive position, and the like. He does not conduct a crusade to prove that all other information is inferior to accounting information.

The perceptive financial executive is stable and reliable in his dealings with business associates. Not for him is the hair-trigger release of half-baked information. He does not run into the boss's office with fragmentary facts, unrelated to any plan, budget, or standard. Neither does he broadcast comparisons of actual and standard showing wide variances, and then wait for people to ask questions before he tries to explain the variances. On the contrary, he will withstand considerable pressure rather than give an unsound answer.

The nonelectronic controller should be first a top manager and second a controller. He should accept and appreciate the sales, engineering, and manufacturing points of view. And he must learn to merge his special contribution with the contributions of others, to be of aid in arriving at the best decisions for his company, and then to help the organization carry out those decisions in the best possible way. It is these very human abilities that will make the nonelectronic controller a continuing asset to his organization. END

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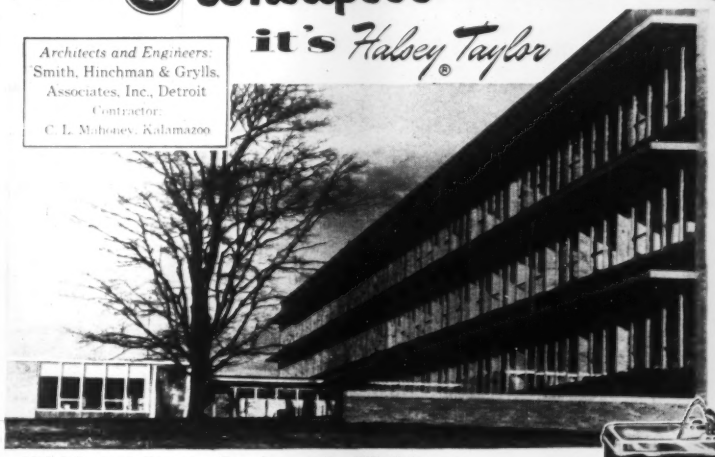

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Government fights interference

Although every industrial advance solves some problems, it usually raises others. As electronic equipment helps industry speed up production and cut costs, it also attracts closer scrutiny by the Federal Communications Commission, whose job includes preventing unwarranted radio interference.

The equipment that most frequently interferes with radio and TV broadcasting (almost invariably without the operator's knowing it) is radio frequency industrial heaters and radio frequency stabilized arc welders. During 1957 the FCC investigated 165 factories suspected of causing interference. Usually the offenders correct the error without fuss, but the president of a plastics concern who stubbornly refused to comply was jailed for 30 days. The corporation was fined $2,500.

Electronic heating equipment is mostly used in the plastics industry, for drying, sealing, and setting, but it is also used by the woodworking industry to set adhesives in furniture and plywood and by metalworking plants for fabrication.

To prevent radio energy from escaping, these devices must be operated in a well-shielded room, usually one lined with copper mesh. Filters in the circuit also help to cut down or end illegal interference.

To track down illegal transmission, the FCC maintains 29 field offices and eighteen monitoring stations. For an explanation of FCC rules on this problem, the Commission has prepared "FE&M Bulletin No. 1," available from the FCC, Pennsylvania Avenue at Sixth Street, Washington 25, D.C.

Pilferproof power tools

For more efficient lighting, some plants are switching to 400-cycle current. A helpful by-product has turned out to be a reduction in pilferage. Costly small electric tools designed for 400 cycles won't work in homes with 60-cycle current.

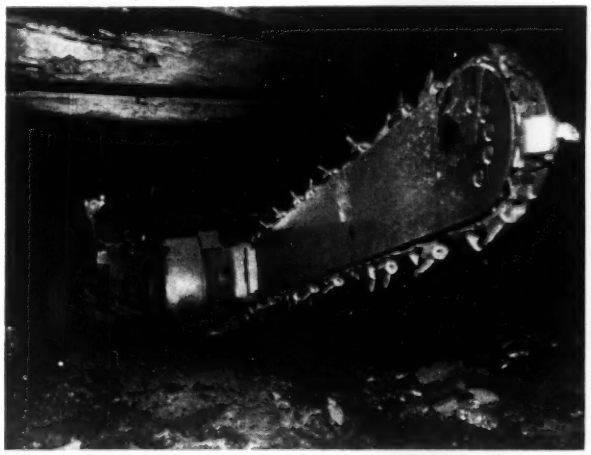
With 400 cycles, more light is produced per watt, and the components are smaller, which is one reason 400-cycle equipment was first designed for aircraft. But use of 400 cycles is now gaining on the ground. Plants can't buy 400-cycle power direct from utilities, but must convert it from 60-cycle.

Automation in the lab

A new device that takes a lot of the tedium out of mass spectrometry points up opportunities to increase the productivity of the nation's scientists and engineers by eliminating what technical men call "coolie labor." Known as "Mascot," the instrument automatically converts the information from the spectrometer into digital signals, which can be recorded on punched tape or IBM cards. At present, time-consuming hand computations are necessary.

The mass spectrometer is widely used in chemical, petroleum, and metalworking industries for product development and quality control.

A prototype of the instrument, a product of Consolidated Electrodynamics Corp., Pasadena, Cal., is reportedly saving the user 1.5 man-



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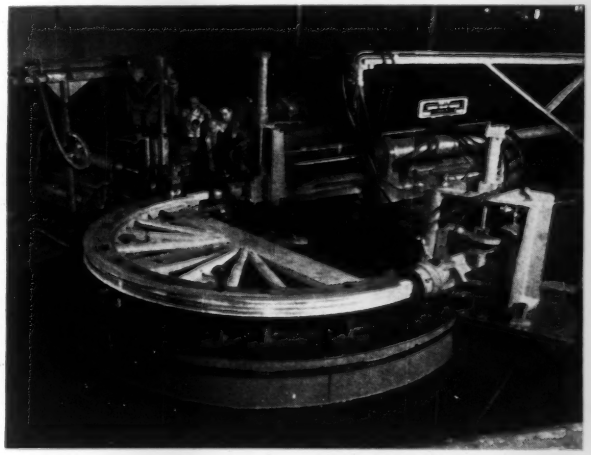

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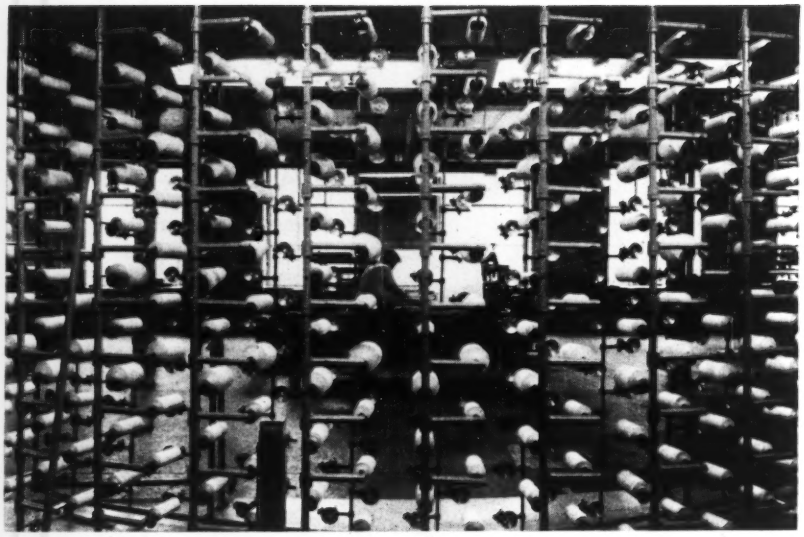

LIGHT TOUCH: Whenever a thread from one of these spools breaks, the Crowther-Garnett creel automatically stops winding and a light goes on over the bobbin. This British development is the result of a collaboration by British engineers and textile manufacturers.

days per day over the manual method.

Sun-loving polyethylene

By adding a new ultraviolet inhibitor to polyethylene, its resistance to sunlight has been greatly increased. Untreated polyethylene does not weather well. Prepared by Eastman Chemical Products, Inc., the modified plastic lasts two to four times longer outdoors. The plastic is available in a variety of colors. Until now, the resistance of polyethylene to sunlight was usually increased by adding carbon black. The resulting black color severely limits use.

Signs of the times

American industrial life has so thoroughly assimilated the team approach that intercompany teams are now appearing. To solve an unusual technical problem, Allis-Chalmers and Radio Corporation of America have joined forces to design and build a facility for advanced research into controlled thermonuclear reactions—that is, the harnessing of H-bomb power.

"C Stellerator Associates" is the name of the team, and the facility will be built at Princeton University. The scientific demands of the project are so great that a single company couldn't handle it alone. —M.M.

EGG DROP: To demonstrate the cushioning ability of synthetic urethane foam, these Allied Chemical researchers drop an uncooked egg ten feet to a urethane pad without damage. The egg just bounces, as shown.

GETTING RESULTS IN 1958 LABOR NEGOTIATIONS

continued from page 45

It's fine to get outside advice on negotiations, but ordinarily a company will do better to negotiate its own contracts. With some good outside advice on some of the major pitfalls, management will quickly learn the angles involved and end up, as a rule, doing a better job than a professional negotiator. In addition, employees feel that management is personally interested in them—and in their working set-up.

In a misguided effort to maintain control, many top managements deny negotiators the authority they need. Every time a decision is to be made, the negotiators have to go to management, discuss it, and bring back the word on what management has decided. Ordinarily negotiators should be given limits within which they can operate freely during the negotiation.

There are occasions when the question of timing is very critical. If the negotiator has the authority to say, "Yes, we'll agree to that," he can often close off a discussion satisfactorily. On the other hand, if he has to go back and rediscuss a point with management, he may well find by the time he returns that things have changed and there are new items in the picture.

The Spirit Counts

"But it says in the contract . . ." Famous last words! They are a requiem for good employee relations. When you insist on hiding behind the exact legal wording of a contract, the chances are you will lose your employees. The best basis for negotiations is to accept the spirit of the contract, even if the legal wording happens to be a little clumsy. Union representatives are more likely to be willing to do this too if they see that you are sincere about it. And if you have notified all employees of the negotiations by sending them minutes of the meeting, they will be aware of the real intent behind the contract. Then it's much easier to get acceptance.

Legal wording needs a "legal beagle." If you wish to go by the strict legal wording, you may, in effect, force your union to go to an outside man (probably an attorney) to negotiate with you. Most union employees feel somewhat uncertain about their ability to deal with "those smart cookies in management." As soon as you become legalistic, they become even more fearful. This tends to create a wall between management and the men and can lead eventually to very poor employee relations.

What Price "Prerogatives"?

One serious problem that enters into many negotiations is that the company becomes overconscious of its "management prerogatives." Ask yourself, "What do we *absolutely need* to run the business effectively?" Whatever leeway you do need might be called your management prerogative. When you look at it this way, it's surprising how many rights that you normally consider management prerogatives aren't absolutely necessary.

Let your union help you. One small plastic company solved most of its seniority problems rather easily, once the basic principles had been agreed on in negotiations, by letting the union committee settle them. In the long run it made comparatively little difference to operations how specific seniority problems were decided. Since the union committee had to answer to the men, they could not get far off the beam. Some companies say, "But it's our prerogative to decide seniority problems." In reality they may be saying that it's their prerogative to take on a problem that doesn't run the business better.

Some companies feel that it's a violation of their prerogatives to agree to a union shop or a check-off for union dues. In some plants it's questionable whether either of these items seriously affects the operation of the business. It's true that a check-off may cost a little in clerical time, but outside of this it may not hurt you. You may argue the moral principle of forcing a man to belong to a union, but it may actually be to your advantage for all employees to be members of the union.

The right to move people between jobs may be much more important to efficient operation than some of the other things management often considers essential.

As long as you have a union, you might as well use it to the best advantage of your company. One way

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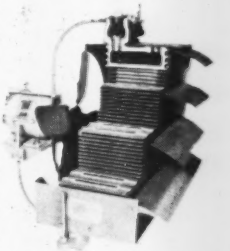


Note double steam chambers in each fin section and wide fin spacing.

Above illustration is all cast iron one-piece, single chamber fin section used in Models 1000 and 1200.

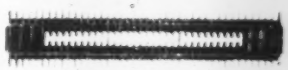
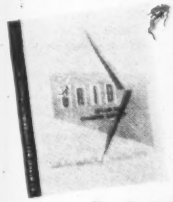


Illustration to right is all cast iron one-piece double chamber fin section used in Models 1500 through 3000 . . . wide fin spacing prevents clogging by lint or dust . . . straight through air passage reduces resistance. Single inlet at top serves both steam chambers permitting quick, even steam distribution.



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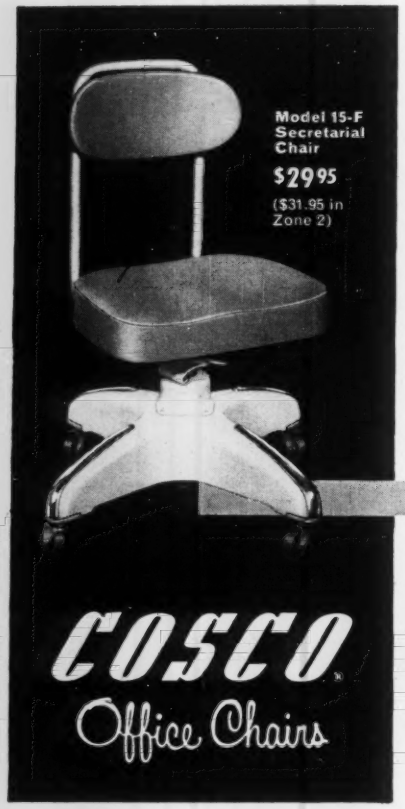

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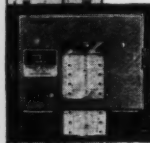

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is to recognize union leaders, give them status, work with them. Men often become union leaders because of frustrated leadership drive or a lack of recognition in their regular work. If you give them respect and recognize them socially, they are likely to be much more willing to work with you.

It's often sound, for example, to meet with your union committee informally once a month or so, not to discuss any serious problem but just to get together. It's surprising how much easier it will be to work with them later when you get to a tough problem.

In dealing with a union committee in negotiations, treat them with respect. In a certain crushing plant, management had a great deal of trouble with one of the union committees. One man on the committee habitually berated the company negotiators, called them names, and generally insulted them at meetings. The management representatives took the abuse quietly and remained gentlemanly, but they held firm when it was necessary. After about the sixth or seventh meeting, the union committee met on its own and told this committeeman either to keep his mouth shut or to stay away from future meetings. They were ashamed of him as a representative of their group, particularly because of the way that management was dealing with them. The meetings moved smoothly after that.

If you approach negotiations in the spirit of working out your problems, it's perfectly normal for your negotiators to be friendly with the union members on the committee and get to know them. This doesn't

THE AUTHOR • With a broad background in management problem solving, including eight years of management research at Minnesota Mining & Manufacturing Company, Edward C. Schleh now heads his own management consulting firm, Schleh Associates, in Minneapolis, Minn. Mr. Schleh, who is also active in international management circles, has written widely on management subjects. This article will appear as a chapter of his forthcoming book, *Executive Management of Personnel*, which is to be published this Spring by Prentice-Hall, Inc.

necessarily weaken either side in negotiation. It does make for better understanding, and it can be a starting point for approaching problems as a mutual concern of management and the union. The company and the employees tend to benefit.

Making Them Accountable

As a basic rule of organization, anybody who has authority (or who has it, in effect, by exercising influence) should be held accountable. Whenever a man exercises influence without being accountable, the result is usually poor operation—in severe cases, chaos. This is especially true, but often unrecognized, in union relations. By the very nature of negotiation, management often allows union leaders to exercise a considerable amount of influence without being accountable for its effect. In general, responsible leadership is developed in any man by holding him accountable.

The union committee of a color plant requested some major rate corrections, claiming inequities. They argued long and loud, and this demand became the major point of the negotiation. The company published minutes of the whole proceedings and sent them to all employees. This created an uproar, because most of the rate adjustments were for jobs that affected the union committee members. At the next meeting the committee had to drop all their claims of inequities because of the trouble they were in with their own membership. By publishing the minutes, the company had made the union leaders accountable to their members.

In another negotiation, this time in a carbon black plant, the principal item was the installation of a new shower room. One of the men on the committee argued heatedly for the new facility, claiming that the old shower room was dirty and inadequate. The company pointed out that there was no assurance that the new one would be any better; that it would depend on the way the men used it. Finally, the company negotiator offered to give the interested union man personal charge of the shower room and even give him the right to lay off someone for a week for an infringement of any rules he set up. The union man accepted this, and when the shower room was put in, he set up very strict rules for its

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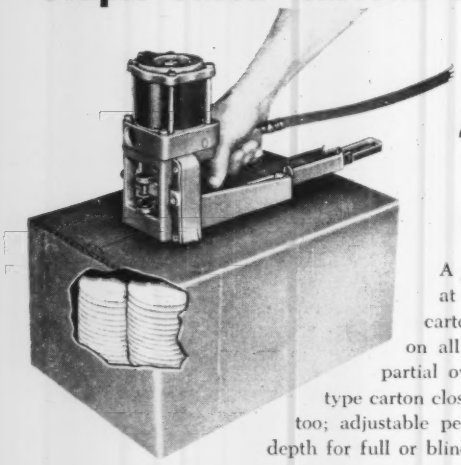

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use. He enforced his rules better than the company could ever have done. As a result, the company had a very clean shower, the best it had ever had, which built a great deal of employee good will. The union leader learned to take responsibility.

Let the union help set wages. Many companies feel that it is their right to set wage rates, and that the union's role should simply be to present arguments if they disagree. Actually job evaluation often works better when union leaders are on the evaluation committee. They can frequently sell the whole job evaluation program to the employees much better if they have had some of the responsibility for setting it up.

No Negotiable Provisions

An error that creeps into some contracts is the kind of clause that is subject to negotiation throughout the year, rather than providing for settlement through a grievance procedure. In some instances such a clause can interfere with sound management operation.

In a machining plant that was putting in time study standards, this provision had been inserted in the union contract: "All work standards must be mutually agreed to by the company and the union before installation." This meant that every standard, no matter how carefully set up, had to be negotiated before it could be put into effect. This led to an almost impossible situation, with meeting after meeting on individual standards. If the union wanted to put on pressure for some reason, it simply disagreed on certain standards. The result was a very poor incentive plan that eventually had to be entirely changed.

The same problem can occur with

"Yes, my few words on finance did some good, Dutton, but we don't refer to them as 'the commercial.'"

wage rates. If they are part of an evaluation system or subject only to grievance procedure, a smoother and easier operation will result.

One Location, One Unit

In plants that have several unions, the company can easily get jockeyed in between the various unions. This often leads to unstable employee relations. Sometimes a union representing a small number of employees can shut down the whole plant over a minor item. As a basic company operating rule, consider all employees at a location as a single unit. In other words, make sure that there's uniform treatment for all men at the same location. This may not mean the same contract clauses for different groups, but the same general principle should be applied to all contracts. Otherwise, you simply get caught between different groups, and end up with poor morale into the bargain.

A printing firm that had six unions came to a very amicable agreement with five of them, but the sixth held out. Finally, after some negotiations, this last group got a much better contract. Several cents per hour were thrown in for extra settlement of inequities. This created a furor among the other five unions. At the next negotiations the company had no end of trouble and wound up having to give the other five extra concessions.

The boiler room workers in a metal processing plant asked to be represented by a different union from that of the rest of the plant. This was held up in an election, so the company negotiated with the boiler group alone. The contract was finally settled with a number of clauses that were more liberal than those agreed to for the rest of the plant. At the next negotiations, management was unable to resist the pressure of the other union for the same thing. But, in giving the more liberal items to the boiler union in the first place, the company had held back on some things that the other union had. In the next negotiation with the boiler plant employees, management was pressed to equalize on these items. This jockeying went on until finally the company insisted that both contracts be opened at once; it wouldn't sign one without signing the other. After that, negotiations went much more smoothly. END

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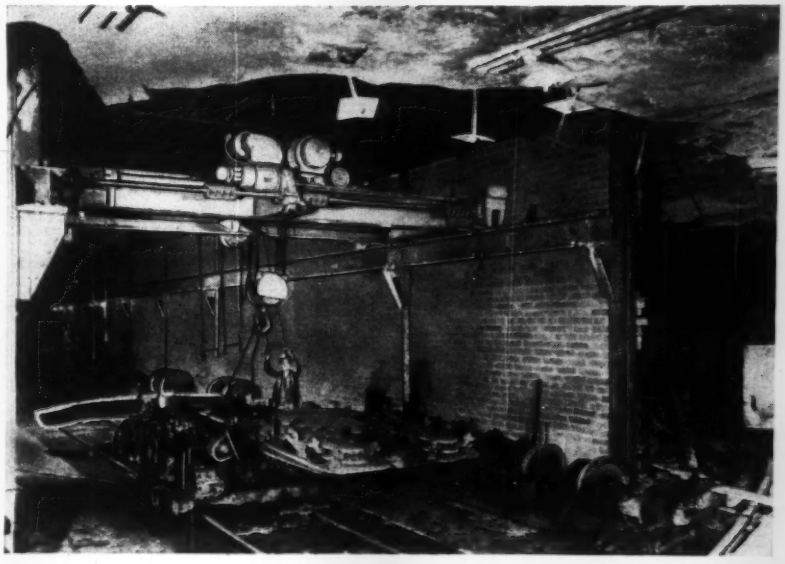

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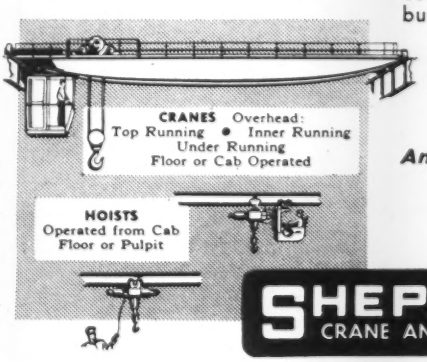

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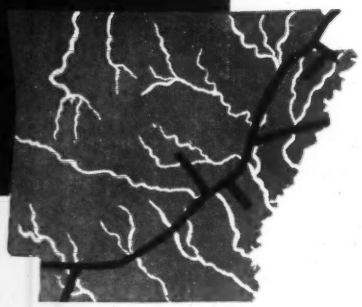

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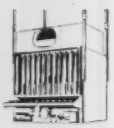

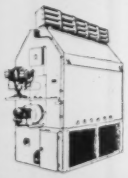

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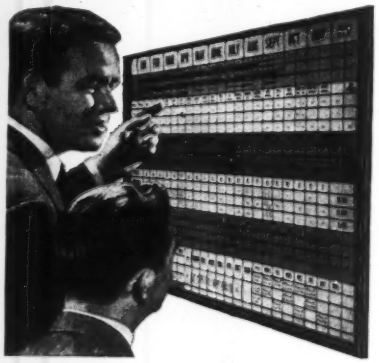

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FAIR TRADE

continued from page 35

Masters asserts that he can operate on a margin of about 11 per cent above cost, compared with the 33 per cent above cost usually needed by department stores. His midtown Manhattan outlet sells at a rate of more than $1,000 a square foot a year, which for a conventional department store would be a phenomenal figure. The National Retail Dry Goods Association figures that a successful department store should sell at the rate of $85 a square foot a year.

Ironically, the manufacturers' list prices and fair trade standards have contributed much to Masters's success. Masters considers manufacturers' list prices a value yardstick and thinks the efficient retailer should be able to sell goods at a profit below these prices.

Masters says of fair trade, "Price-fixing by any label—and so-called 'fair trade' is one of its labels—is an umbrella held over a high-cost operator to cover his need for a mark-up high enough to allow him to continue an inefficient, poorly managed, obsolete method of doing business."

Victory by Default

But whether or not fair trade is able to turn the tide that is running against it in the courts, most manufacturers seem to be moving away from resale price maintenance.

Three factors are responsible for this trend: the failure of retail outlets to abide by fair trade prices, the high cost to manufacturers of enforcement, and public support of discount houses.

The W. A. Sheaffer Pen Company, once one of the leading advocates of fair trade, abandoned it two years ago. Edmund Buryan, Sheaffer's marketing vice president, said of the move, "When the Sheaffer Pen Company went off fair trade, it removed itself from any possibility of publicly endorsing one policy, but being in practice incapable of uniformly and honestly enforcing adherence. Sheaffer dealers are friends of the company. We do not think their cooperation can be enforced with the billy club of the law." Here's how the company states its present position: "We will continue to follow this policy of determining which dealers will sell our products. We

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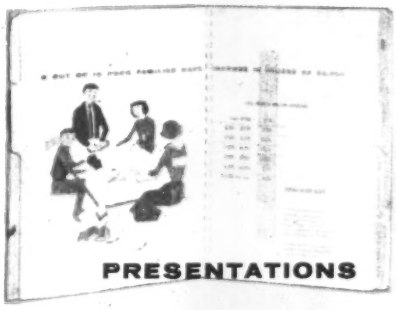

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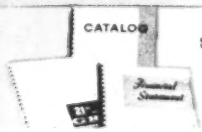

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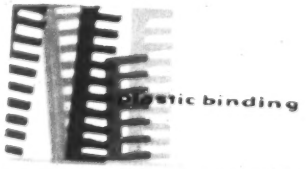

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are now adding certain high-volume mass merchandisers [i.e., discounters], because we recognize that this type of outlet is used by a substantial number of purchasers, just as other types of outlets meet the needs of their customers."

The statement adds, "In fairness to all Sheaffer dealers, we are now permitting them to price our merchandise in accordance with their own local economic conditions and competitive practices. Sheaffer will no longer enforce its fair trade policy, but will continue the use of suggested retail prices."

A company spokesman said that the firm's fair trade enforcement had cost nearly $1 million a year, that it was not supported by retailers, and that Sheaffer missed its share of the market by not being able to sell to certain high-volume retailers.

THE AUTHOR As an editor of *Vend* magazine and a contributor to *Billboard*, Aaron Sternfield has been covering the marketing front for the past five years. Former editor and publisher of the Brookline (Mass.) *Chronicle*, Mr. Sternfield began his career as a reporter for the *Bismarck* (N.D.) *Tribune*. Moving on to the copy desk of the Atlantic City (N.J.) *Daily World*, he later became feature editor, news editor, and editor, successively, of *Hunting and Fishing* magazine.

Sheaffer's sales have been little affected by the discontinuance of fair trade. Sales for the fiscal year ending February 28, 1956, were $26,016,201. Sales for the following fiscal year—corresponding to the first full year without fair trade—were $26,284,942. While the 1957 sales figures are not yet in, a company spokesman has said that gross income is running somewhat ahead of 1956.

Conflicting "Proofs"

Another major pen manufacturer, the Parker Pen Company, adopted fair trade within nine months after Sheaffer discarded the system. No pattern is evident here, as Parker's sales showed a slight increase after the firm went on fair trade. Fair trade's advocates will cite Parker to prove their point, and its opponents will point to Sheaffer to bolster their arguments.

Before Parker went on fair trade, 20,000 dealers were on the factory's lists. Today, after slightly more than a year of fair trade operation, the

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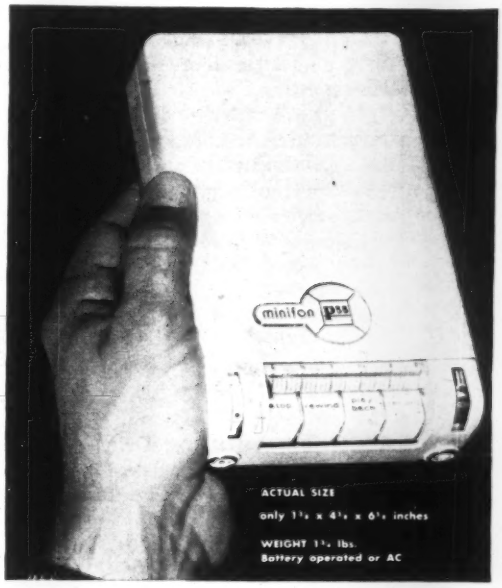

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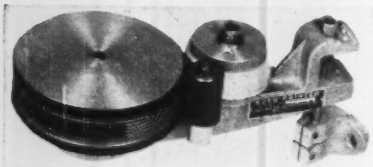

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list stands at 17,000. According to John C. Mack, Parker's domestic sales head, the loss of the 3,000 dealers "was both natural and anticipated, since many of this surplus number were dealers on record only, who had not actively carried our line for some time."

As proof that the loss in number of dealers has not hurt Parker, Mack cites increased sales since fair trade went into effect.

He says that the franchise program has cost about $130,000 to enforce, with legal firms being retained in New York, San Francisco, and Chicago.

In the first year of enforcement, Parker has instituted some 292 fair-trade actions. Of these, 177 injunctions were obtained, 96 are pending in court, and 19 were dropped after settlement. Another 99 investigations of suspected fair trade violations are pending.

Battle of the Bantams

It is no coincidence that most of the fair trade battles have been over the retail prices of small and relatively low-cost items. Drugs, cosmetics, and "traffic" (or portable) appliances are likely to be fair-traded. Refrigerators, television sets, and automobiles seldom are.

The sale of an automobile, refrigerator, or washing machine means a lot to most retailers. If slicing a few dollars off the manufacturer's list price means making the sale, a goodly number of retailers will cut the price. The discount house is not the only retail outlet that sells major appliances off list. The department store and the neighborhood appliance shops often engage in the same practice. Most manufacturers recognize this and make no attempt to fair-trade such items.

On lower-cost products, the temptation to cut price is not so strong for the average retailer. The profit from any one sale is not large, and in any case the customer is less likely to shop for the lowest price.

For example, it would be relatively easy to fair-trade safety pins, but difficult to hold to fixed prices on motorboats. Where the line is, may be difficult to determine, but General Electric, for example, fair-trades its table-radio line, but makes no attempt to fair-trade its console models.

Among the staunchest advocates of fair trade are the cosmetic houses. Most of their sales are to druggists who deal mainly in nationally advertised, low-cost products and who observe manufacturers' list prices more faithfully than most retail groups.

According to Louis J. Bernstein, general counsel of Coty, Inc., the firm's attitude toward fair trade is simple: "We'll sue anybody and everybody who cuts prices."

Actually, Bernstein says, the company has had little occasion to sue anybody, with only three or four cases in the past year. The cosmetics industry pioneered fair trade, and most druggists adhere to the minimum prices.

In fact, Bernstein relates how E. J. Korvette, New York discount house, once sold Coty products below fair trade minimums. A Coty representative convinced Korvette that by holding firm on the fair trade price, the company might lose some business, but would make more money.

Coty intends to stay with fair trade and to substitute a consignment plan if fair trade is ever thrown out by the courts. Under the consignment or *del credere* plan, Coty would retain title to the merchandise until it actually reached the consumer. If the selling policies of the wholesaler or retailer ran counter to Coty's policy, the manufacturer would have the right to take back the merchandise.

On Both Sides of the Street

General Electric, one of the nation's largest manufacturers of consumer goods, does not fair-trade major appliances, but does have a fair trade policy in its Housewares and Radio Receiver Division.

W. H. Sahloff, vice president and general manager of the division, lists three reasons why the firm will attempt to enforce fair trade vigorously:

- About 73 per cent of all retail sales are in fair trade areas.
- GE maintains that most distributors, both wholesale and retail, favor fair trade.
- The company believes that "it is necessary to maintain an orderly market condition and fair prices for our products in the electric housewares industry, which is based on a mass exposure, mass distribution, and mass advertising type of brand-name selling."

Sahloff says GE will probably maintain its fair-trade policy as long as no better system is available, as long as sufficient states maintain fair trade laws to make it feasible as a national program, and as long as most dealers and distributors support the policy. He states GE's position in this fashion:

> We are not free to set our retail prices at any level we choose. Our products must compete in the marketplace with those of all our many competitors, and our fair trade prices must be acceptable to the public when compared with others. And, incidentally, this price comparison must be with the actual prices charged for competitive appliances, and not with their advertised or list prices.

Sylvania Electric Products, Inc., also makes no attempt to enforce fair trade on major appliances, but does fair-trade camera items.

A Sylvania spokesman said of the company's policy:

> Decisions regarding adoption of fair trade are made by the various divisions of Sylvania. Presently, fair trade policies are maintained on the company's flashbulb line and on products of its Argus Camera Division. It is planned to fair-trade Sylvania flashbulbs in those states where appropriate laws are still fully effective. The policies are enforced through legal remedies available under the terms of the fair trade acts of the individual states involved. Current plans are to continue fair trade where applicable.

Some of the major fair trade manufacturers admit that resale price maintenance is growing weaker. W. B. Rose, vice president of the Bissell Carpet Sweeper Company, says that it has only a "fair future." Eastman Kodak feels that it is "growing weaker and harder to enforce." Charles Pfizer & Company sees fair trade's only chance for survival in the drug field. The Omega Watch Company blames the manufacturers for failing to prosecute violators.

Sales Didn't Suffer

The largest firm so far to go off fair trade is Westinghouse Electric. When the firm abandoned fair trade in September 1955, a few dealers dropped the line. But the discounters began carrying Westinghouse small appliances, and many of the dealers who dropped out are back in the fold.

S. J. Stephenson, manager of the Westinghouse Portable Appliance Division, says, "We feel that after a fair trial, our policies have proved successful, and we do not intend to return to fair trade."

Within a year after dropping fair trade, Westinghouse small-appliance sales jumped 34 per cent. The removal of fair trade undoubtedly had something to do with this large increase.

However, Westinghouse still tries to maintain suggested retail prices. Westinghouse has cooperative advertising money available to its retailers —but not to those who cut prices on its products.

Representative of the attitude of many smaller manufacturers who oppose fair trade is a statement from Hilliard Smuck, vice president and general manager of the Quaker State Metals Company, which manufactures aluminum gutters, siding, and roofing, and sells them both to the trade and to the consumer. Says Smuck: "The public interest is best served and the future of the growing aluminum business is better off under the natural system of supply and demand than under any regulated or projected price program—and that includes fair trade."

Grave-Diggers

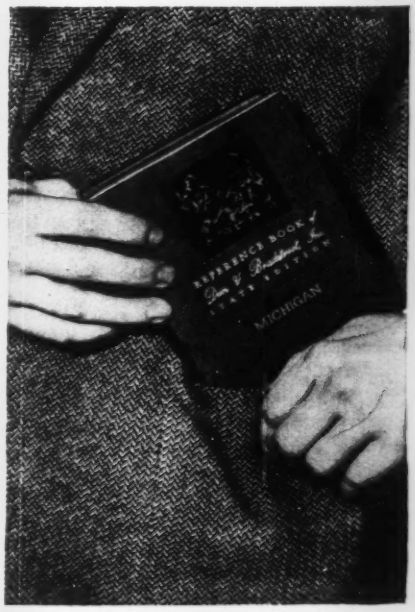
If fair trade dies, the manufacturers will have had a part in digging its grave. As a matter of policy, many concerns force their distributors to buy a specified volume of products. When, as sometimes happens, a distributor has to take on more than he can sell, the temptation to dispose of these surplus stocks to discounters is great. According to Coleman Cuttler, a New York appliance distributor, the quantity discount system often lures a dealer into buying 1,000 electric irons when he only needs 300. The other 700 are dumped at cost.

In many product lines, national advertising and manufacturers' warranties have been twin boons to the price-cutter. The consumer has come to rely increasingly on the manufacturer rather than the retailer and tends to buy the product where he can get it cheapest.

This has provided the spur for discounters to sell below fair trade prices. And many manufacturers, aware of the sharp rise in discount selling, are loath to pass up this market.

In fact, the manufacturer's very attempt to control retail prices gives the discounter a base price from which to work.

No existing methods of retail-price



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control have proved entirely successful for manufacturers, although they have been effective in isolated cases.

Consignment selling, for example, has been used for many years by electric light bulb manufacturers. Since dealers have no funds tied up in inventory, there is little temptation to cut prices. However, the manufacturer's capital is tied up in merchandise that is in dealers' hands and out of his control.

Trade-In Loophole

Direct selling to the consumer is another method of maintaining retail prices, but few manufacturers could embark on such a program without losing a large part of their distribution, and few products enjoy enough sales volume to make such a system workable.

Both direct sales to retailers and the use of franchised distributors have had some success, but the number of retail outlets willing to handle products that must be sold at minimum prices are often limited. Also, the cost of enforcement is considerable.

Trade-ins can make a shambles of the fair trade laws. For example, if all automobiles were fair-traded, and all dealers adhered to fair-trade prices, the laws would still be meaningless. The dealer would merely inflate the price offered for the trade-in, and that action would be tantamount to cutting the list price.

One West Coast discounter accepted old brooms as "trade-ins" for a well-known vacuum cleaner. Trade-ins for fair-traded electric shavers are common practice, with the trade-in allowance exceeding the value of the old electric razor.

If the one-price system is to exist, it must have widespread public support, regardless of how the courts decide the fair trade issue. With the rise of the discount house and with increasing price consciousness in the automotive, appliance, and food fields, this support is waning. In the long run, fair trade legislation will reflect the will of the public. Today, the public is not showing much enthusiasm for fixed minimum retail prices.

But with or without fair trade, minimum prices will prevail in many fields. The daily newspaper and the individual bottle of soft drink will be sold at fixed prices, fair trade or not.

In the drug and cosmetic fields, minimum retail prices on many nationally advertised items will be the rule. Laws forbidding the retailer to sell goods below his costs are effective in many states. The "loss leader" gimmick may be in for some trouble.

But legislation calculated to prevent a retailer from selling goods below cost is not the same as fair trade legislation. The former prevents the retailer from using nationally advertised products as bait. The latter sets an arbitrary price, below which he may not sell.

How It Adds Up

The manufacturers care primarily about increasing sales and profits. Limiting their sales to outlets that will agree to abide by minimum retail prices can cut deeply into both.

That doesn't mean that manufacturers will cease posting list prices and making at least token efforts to see that these prices are observed. But it does mean that in the long

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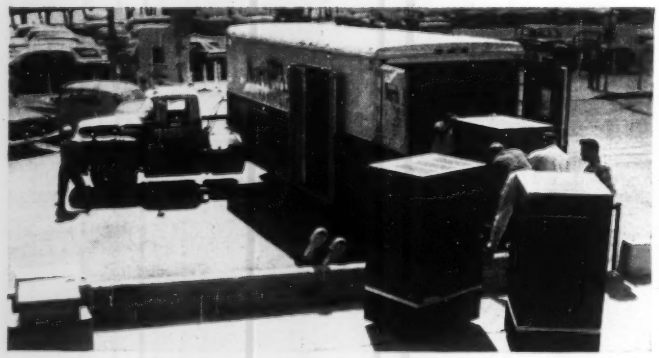
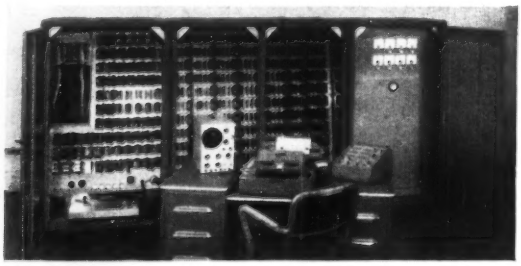
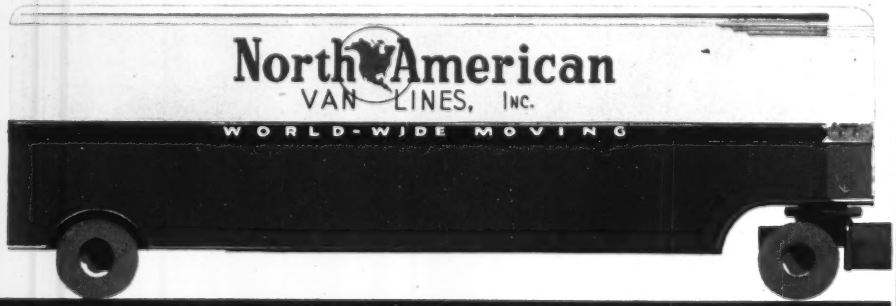




Left—Alwac, electronic digital computer, loads *uncrated* into padded van at manufacture's West Coast plant. **Right**—North American's fast, safe service—door-to-door—has customer's unit in operation ahead of schedule.



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run manufacturers will probably sell to whoever can move their goods, with the suggested list price serving as a guide to the value of the product. In the major-appliance field, this condition already exists. It is spreading to other fields with the weakening of fair trade laws.

Intangible Assets

While this trend will aid the large, efficient retailer, it doesn't spell doom for the small business man. The neighborhood shopkeeper's willingness to put in long hours helps, in part, to reduce the advantage held by his larger competitor. And such intangibles as local service and close customer relations are powerful assets of the small retailer.

Neither does the trend away from fair trade mean that the law of the jungle will prevail in the market place. In the main, fair trade prices have not been too unrealistic. General Electric, which still enforces fair trade prices on its smaller appliances, has reduced list prices on these products. Other manufacturers may follow suit. The passing of fair trade will probably account for lower price levels on some products. But they will not necessarily be drastic cuts.

Drastic price cutting generally takes place when the margins between the retailers' costs and suggested list prices are so great that the retailer can afford to give bargains. Products normally subject to sharp price cuts have seldom been fair-traded.

Ironically, some of the current supporters of fair trade may soon be favoring the repeal of minimum resale price legislation. For example, the latest Supreme Court ruling upholds the right of a retailer in a non-fair-trade state to sell price-fixed items at discounts in fair trade states by mail. Masters sells to New York from Washington. Hess Brothers, an Allentown, Pa., department store, plans to set up an out-of-state firm to sell goods in fair trade Pennsylvania. Retailers will probably want to meet such mail-order competition. And to do it, they may very well seek the end of the fair trade laws they originally supported.

It was no accident that fair trade was born in a depression. In times of economic stress, courts and legislatures seem more kindly disposed toward various methods of price-fixing. In times of rising prosperity, the accent is on freer competition. The current slackening of economic activity may temporarily slow down the trend away from fair trade, but it is unlikely to bring it to a halt.

Selling More for Less

The normal competitive processes bode ill for fair trade. Retailers generally are more interested in net profit on total sales than on the specific mark-up on an individual item. If they can move more goods and come out with a greater net profit by selling at small margins, they would rather do so than sell a limited amount of goods at bigger margins. In other words, the typical retailer would rather net $50 on sales of $1,000 than net $40 on sales of $500.

All signs point toward the eventual demise of fair trade—the courts, law-making bodies, manufacturers, retailers, and consumers are helping to speed the event. Fair trade is not dead yet, but it is dying. END

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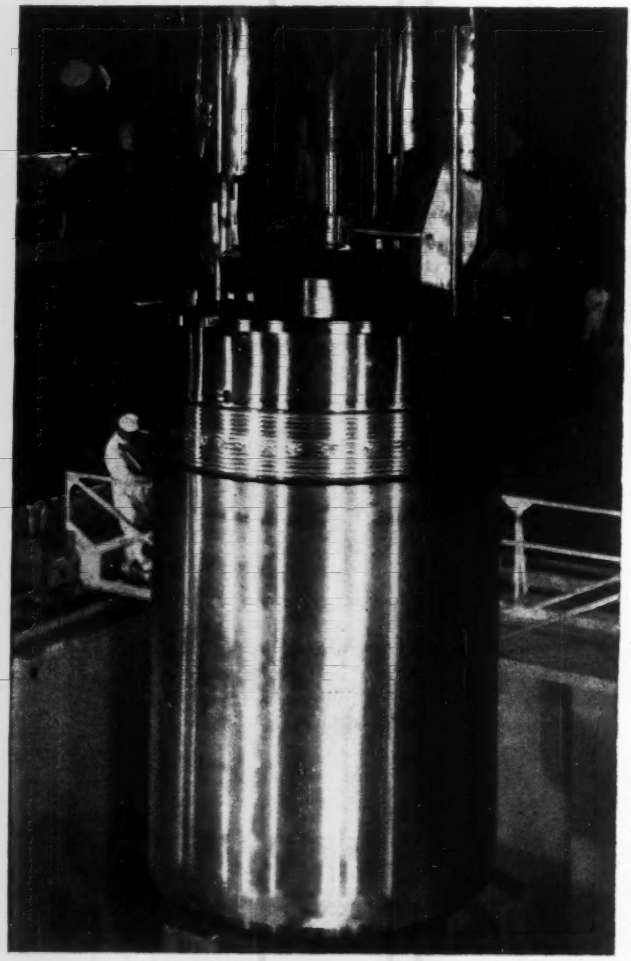

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How competitive is your company in terms of management compensation? A new survey shows what an executive might expect to find on the other side of the fence.

Would you be making more money if you had chosen a different industry, or if you were working in a different section of the country, or for a bigger company?

A great many executives think they would be. After all, everyone knows that the South is a comparatively low-pay region, that salaries in some West and East Coast areas are the highest in the country, that steel, autos, and oil are high-pay industries, and so on. The best bet—for young men starting out, or for the more experienced who are planning to change jobs—might seem to be the largest company in the best-paying industry in the best-paying section of the country.

But the answer is not so simple. Even though the statistics on geographical, industry, or company-size differentials are accurate enough, there is another factor of key importance: how far you expect to go.

Importance of Size

On the hourly paid or clerical level it's the geographical and industry differentials that count. Company size, as a rule, makes little or no difference. Small companies must compete with large ones for employees, and they tend to keep first-level pay in line.

A man who doesn't expect to go much beyond the middle-management ranks can ignore not only company size, but industry and location as well. A small company in a low-pay region and a low-pay industry is just as likely to pay its middle managers well as is a large corporation in a high-pay industry and a high-pay section of the country.

But for any man who's determined to get to the top of either a company or one of its major departments, company size is all-important. In general, the bigger the company, the higher the pay of the president and of the chief marketing, production, finance, personnel, and public relations executives.

Those conclusions, at least, can be drawn from the American Management Association's compensation studies, the most recent of which—a study of top management pay in 1956 (covering nearly 4,000 companies)—has just been released.

Middle-Management Salaries

According to Dean Rosensteel, director of the service, geographical differentials tend to fade out at about the $7,000-a-year level, and there is not much difference among industries in the case of the middle-management executive who never reaches the top of his department. (Even the family-held companies, which are generally believed to pay less than the average to everyone except members of the family, seem to follow this pattern nowadays.) At the higher levels, he says, the industry differentials reappear in the statistics, but this is mainly because some industries—automobiles and steel, for example—include more big companies than small ones.

"You got the raise!"

This is not to say, of course, that the executive can never hope to better his lot by changing companies. The rules apply to averages, not to individual situations. If a company really wants a man, it is generally willing to pay more to get him, and as much as 50 per cent more is quite common. In some cases it may offer even a 100 per cent raise.

Nature of the Business

Again, a given job may be worth more in one company than in another because of the nature of the operations. For example, a company whose profitability depends heavily on research is likely to pay its research director a great deal more than the average company of its size.

The company's general profitability has a bearing too, of course. But the correlation between higher profits and top executive pay raises is not always exact. For example, last year the companies surveyed by the AMA showed a 5 per cent gain in net profits, and top management pay increased by 5.1 per cent. But in 1955, profits were up nearly 25 per cent over 1954, and the average top executive pay rise was only 5.9 per cent. In 1952, when average net profits decreased, top management compensation remained practically unchanged from the previous year.

The Lowly Division Head

Finally, the pay of the top man and his chief aides tends to be lower in companies that are divisions of other companies than it is in independent concerns. Chief executives

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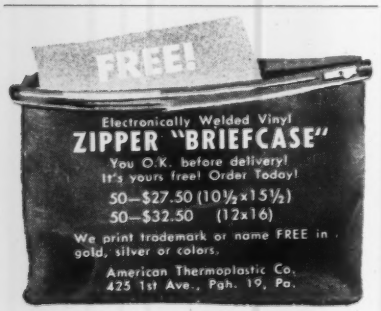

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of divisions get only about 75 to 80 per cent as much as the heads of independent companies of comparable size.

The reason appears to be that no matter how decentralized a multi-division organization is, some responsibilities remain in the home office, and the divisional jobs are lighter in consequence. For example, though the head of a division may be held accountable for return on capital, he does not have to scrounge around to raise new money, as the head of an independent company does.

The differential in what might be termed the lower echelons of top management – personnel managers, for example—may be about the same, or it may be a little smaller. On the average, a personnel manager of a division gets from 75 to 95 per cent as much as the man who holds the same position in an independent concern no larger than his division.

Spotting the Trends

Over the eight-year period covered by the AMA compensation studies, some trends are now beginning to be discernible. One is a slight narrowing of the pay differentials between company presidents and their chief aides.

Taking the top man's pay as 100 per cent, compensation of the other chief executives lines up like this:

Second highest-paid man (generally the board chairman or the executive vice president)	72–79%
Chief marketing executive	56–62%
Chief financial executive	53–60%
Chief production executive	47–51%
Chief personnel (or industrial relations) executive	26–31%
Chief public relations executive	22–24%

In the first survey, published in 1949, position titles were not used, but, again using the president's salary as 100 per cent, the compensation of the highest-paid men stacked up this way:

Second-highest-paid man	69–77%
Third-highest-paid man	50–57%

Decline of the Bonus

Another trend, which may come as a surprise to those who have been reading reports of new bonus plans, is that, by and large, the executive bonus is on the decline as part of total executive compensation. Five years ago, bonus payments accounted for 58.8 per cent of the compensation of those who got them. In the

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latest survey, the figure was 37.3 per cent.

Actually, Mr. Rosensteel points out, paying executives almost entirely by bonus is more typical of companies under older managements than of younger organizations.

"In one old-line concern," he says, "the founder is still chairman of the board. His salary is $10,000 a year, and no one in the organization gets a higher one. The bonuses, however, probably run into hundreds of thousands. But that is likely to be changed when the founder retires."

Are Surveys a Factor?

Incidentally, a question that sometimes comes up about the AMA surveys is whether they actually influence trends as well as report them.

Not long ago, for example, the owner-manager of a company who was paying himself $60,000 a year and his second in command $10,000 looked at the returns and announced that he had "got religion," and was going to give his hard-working lieutenant a big raise.

It is undeniable that many companies use the ratios and the actual dollar figures (which AMA does not make public) as guides. (Companies watch the figures, Mr. Rosensteel says, not because they are afraid of losing executives—turnover has been greatly exaggerated—but because they fear the effects of lowered executive morale.)

However, AMA does not, at present, believe that its figures have affected practice enough to change the averages. If the survey goes on for twenty years, Mr. Rosensteel admits, they might well begin to do so. But up to now, he is sure that has not happened.

ALICE SMITH

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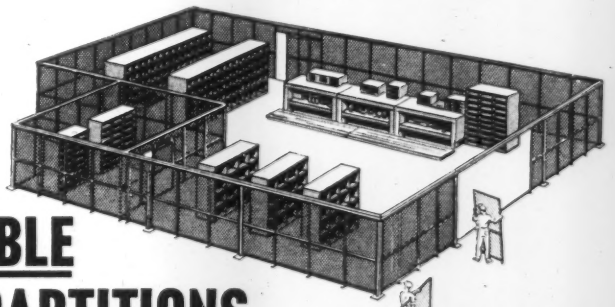

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San Francisco

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Cash on Hand and in Banks	$ 282,806,120.14
U. S. Government Obligations	402,878,677.58
State, County and Municipal Bonds	80,491,221.52
Other Bonds and Securities	34,003,054.48
Stock in Federal Reserve Bank	2,400,000.00
Loans and Discounts	850,202,846.88
Bank Premises and Equipment	16,170,212.42
Other Real Estate	1.00
Customers' Liability under Acceptances	1,922,311.76
Accrued Interest Receivable and Other Assets	11,991,714.91
Total Resources	$1,682,866,160.69

LIABILITIES

Deposits		$1,539,688,411.50
Acceptances Outstanding		2,228,600.76
Reserve for Unearned Discount		14,636,512.61
Reserve for Interest, Taxes, etc.		11,575,086.35
Other Liabilities		4,189,956.59
Capital Funds:		
Capital Stock ($10.00 par value)	$27,812,500.00	
Surplus	52,187,500.00	
Undivided Profits	30,547,592.88	110,547,592.88
Total Liabilities		$1,682,866,160.69

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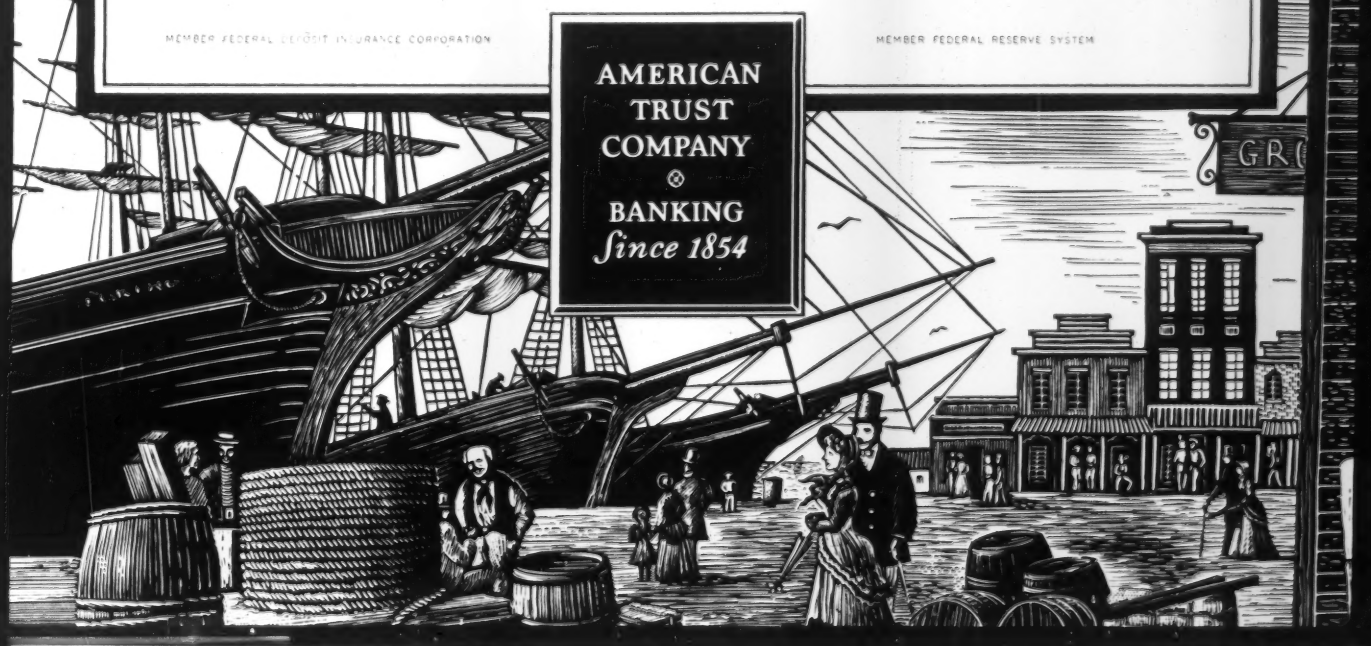

WHEN THE GOING GETS TOUGH

HERE WE ARE in a mid-Winter thaw, economically speaking. The crust is soft, but there's solid substance underneath. Some businesses, like some race horses, are good "mudders" and have the stamina to win when the going gets tough. The business indicators are by no means uniform. Although steel, construction, apparel, foodstuffs, and services are reacting in a variety of ways, the total situation is far from gloomy.

The drying-out process of a lush economy can be painful, but the net result can be good for the health of business. The plateau on which we have been riding after a seventeen-year climb is by no means a smooth surface. Many areas of management are faced with difficult decisions affecting employment, inventories, sales volume, and price levels. We have taken a long stride into one of the most competitive years since the end of World War II, and we ought to profit by the experience if nothing else.

Management has been expecting this test for more than a decade. Some unforeseen factor—the population upsurge, the Korean War, the alternate frowns and smiles of the Kremlin—has always delayed the challenge by lending an inflationary support to the market place. It would be helpful to know that our industrial machine could maintain a black-ink scoreboard without a major assist from military spending. With the stepped-up missile program in 1958, the most we can look for is a partial test of the well-trained but untried managements in thousands of American companies, a generation of executives without the wound stripe of a red-ink year.

Never has management been so concerned with the science of cause and effect in research and product development, in sales psychology, and in stockholder relations, as it is today. Management informs itself with every statistical guide available, drawing on all the indices, ratios, and samples that can be used to determine trends and suggest a course of action. Does this indicate, perhaps, too much practice and not enough performance?

No company president was ever given his post because of statistical talents. Company policy and progress are the result of imagination in action, projecting the mind into the risks and profits of the future. Judgment can be influenced and supported by the index number and the ratio. Facts can shed light upon the area of risk. However, it is the leader who, having absorbed all the information available, steps away from it all for a perspective on the whole economy, its short- and long-term hazards and promises, and in the end makes the inspired, or at least courageous, decision. Even if he is wrong, he may start a trend or even a stampede among the imitators and second-guessers.

Here is a program of beneficial action for the months ahead:

1. More productivity to balance the inflationary theft of values and more net spendable income to offset any deflationary pressures. More personal and corporate savings to provide capital for expansion, plant remodeling, tool replacement.

2. Better training of middle management through greater responsibility for decisions, even at the risk of some wrong guesses. Men grow rapidly with authority, and good men are right most of the time. Better coordination between line and staff management through joint effort. Better use of retiring management on an advisory or consulting basis, after the usual chain reaction of new assignments.

3. Less reliance on government for support, guidance, or discipline in business; less use of Washington as a wailing wall. The Potomac is flooded with the crocodile tears of bureaucrats who can't help even if they would.

4. Less waiting to see what the competition will do. Less trend-spotting and more trend-setting. Less talk and more field work on product testing, market research, and sales training.

5. Prompt action when the facts warrant decision. Management can be wrong even when it's right, when it delays hiring, firing, moving, staying, merging, divorcing, or dispersing, or shirks any other call to judgment. *Failure to act* is a primary cause of failure in any venture.

The resources for prosperity during the rest of 1958 are all around us in reasonable supply, but we may have to dig deeper and climb higher to keep ahead of the break-even point. And the results will come more from individual judgment than from trend momentum—which is, of course, as it should be in a competitive economy. All in all, 1958 looks like a good year for those who make it good by personal decision and action.

The Editors

What is the Bell System?

The Bell System is wires and cables and laboratories and manufacturing plants and local operating companies and millions of telephones in every part of the country.

The Bell System is people . . . hundreds of thousands of employees and more than a million and a half men and women who have invested their savings in the business.

It is more than that. **The Bell System is an idea.**

It is an idea that starts with the policy of providing the best possible telephone service at the lowest possible price.

But desire is not enough. Bright dreams and high hopes need to be brought to earth and made to work.

You could have all the equipment and still not have the service you know today.

You could have all the separate parts of the Bell System and not have the benefits of all those parts fitted together in a nation-wide whole.

The thing that makes it work so well in your behalf is the way the Bell System is set up to do the job.

No matter whether it is some simple matter of everyday operation—or the great skills necessary to invent the Transistor or develop underseas telephone cables to distant countries—the Bell System has the experience and organization to get it done.

And an attitude and spirit of service that our customers have come to know as a most important part of the Bell System idea.

Bell Telephone System

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